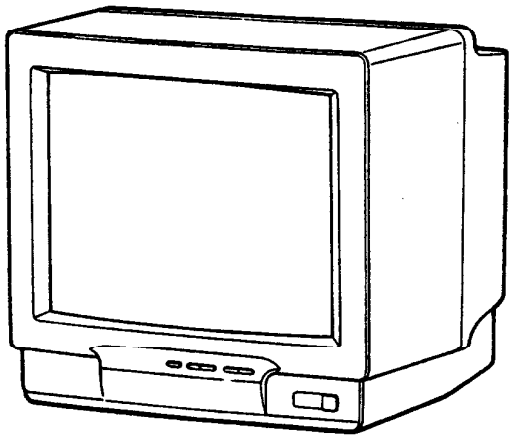
KV-2185AS
RM-827S

SERVICE MANUAL

Australian Model
Chassis No. SCC-F35B-A



G 3 E CHASSIS

MODELS OF THE SAME SERIES	
KV-2185AS	
KV-1415AS	

SPECIFICATIONS

Power requirements	110–240 V AC, 50/60 Hz	
Power consumption	Indicated on the rear of the TV	
Color system	PAL, PAL60, NTSC4.43, NTSC3.58	
Television system	B/G	
Channel coverage	Low VHF band	0 – 5, 5A 1 – 3
	High VHF band	6 – 11 4 – 10
	UHF	28 – 69
	CATV	S01 – S03, S1 – S20
Audio output	3 W	
Inputs	Antenna: 75 ohms VIDEO INPUT jacks (except for KV-1405GE/1415AS): phono jacks Video: 1 Vp-p, 75 ohms Audio: 500 mVrms, high impedance	
Output	Earphone jack: mini jack	
Picture tube	Approx. 54 cm (21 inches)	
Dimensions	Approx. 520 × 462.5 × 486 mm (w/h/d)	
Weight	Approx. 24 kg	

Design and specifications are subject to change without notice.

MICROFILM

TRINITRON® COLOR TV
SONY®

TABLE OF CONTENTS

Section	Title	Page
1. GENERAL		
1-1.	Antenna Connection	3
1-2.	Connecting VTR or Other Equipment	4
1-3.	Preset the Channels Automatically	4
1-4.	Watching the TV	5
1-5.	Watching the Video Input	5
1-6.	Adjustment	6
1-7.	Additional Presetting	7
2. DISASSEMBLY		
2-1.	Rear Cover Removal	8
2-2.	Service Position	8
2-3.	Picture Tube Removal	9
3. SET-UP ADJUSTMENTS		
3-1.	Beam Landing	10
3-2.	Convergence	11
3-3.	Focus	13
3-4.	Screen (G2) and White Balance	13
4. CIRCUIT ADJUSTMENT		
4-1.	A Board Adjustments	14

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

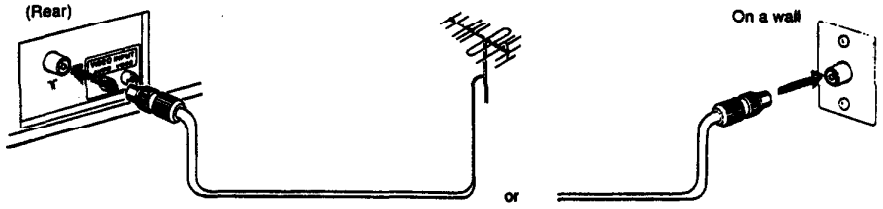
SECTION 1
GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

1-1. ANTENNA CONNECTION

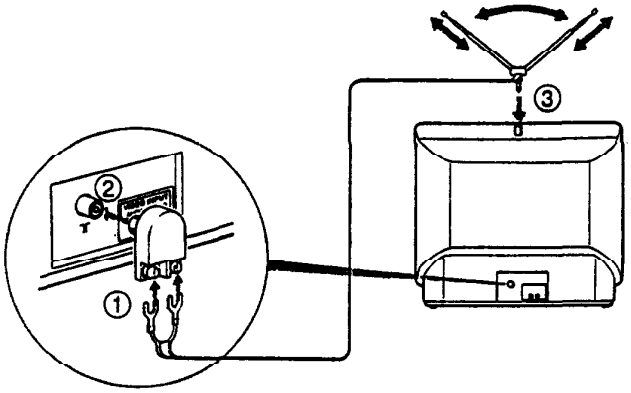
To connect a VHF antenna or a combination VHF/UHF antenna– 75-ohm Coaxial Cable (Round)

Plug the connector into the 𝕋 socket of the TV.



To connect the indoor antenna

(Except for KV-1485GET, 1685GET, 1985GET, 2185GET, 1985AS, 2185AS)



We recommend using an outdoor antenna for better reception.

For KV-1405GE or KV-1415AS

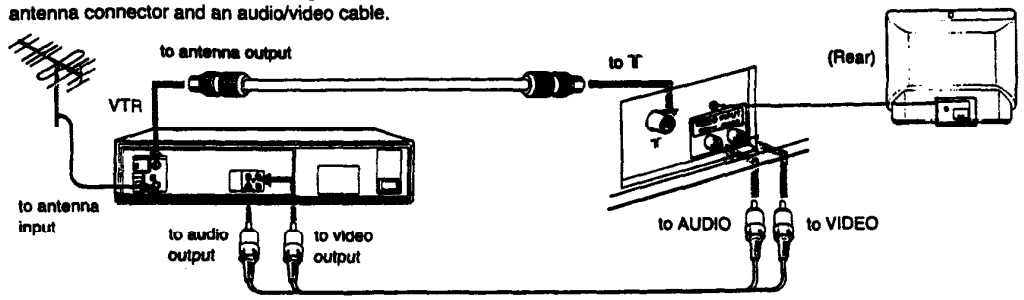
KV-1405GE KV-1415AS	These models do not have audio/video jacks. Use an antenna cable to connect a VTR. (Page 3)
KV-1405GE	This model is not supplied with a Remote Commander. Use the buttons on the TV for operation. (Pages 4, 5, 6)

2

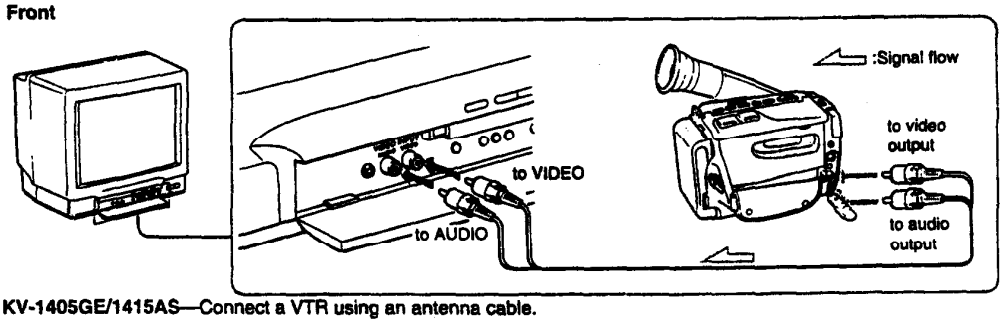
1-2. CONNECTING VTR OR OTHER EQUIPMENT

Rear

You can connect the antenna through VTR. Use an IEC antenna connector and an audio/video cable.



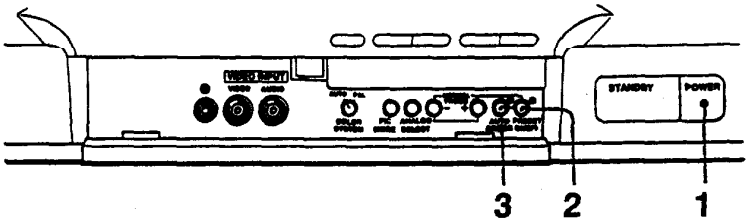
Front



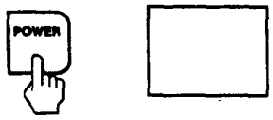
KV-1405GE/1415AS—Connect a VTR using an antenna cable.

1-3. PRESET THE CHANNELS AUTOMATICALLY

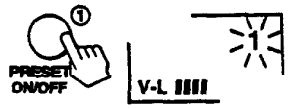
Up to 30 channels (1 to 29, 0) can be preset in numerical sequence from program number 1.



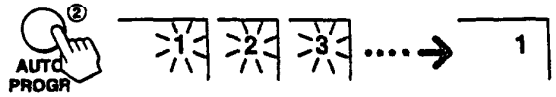
1 Press the POWER button.



2 Press the PRESET ON/OFF ① button.

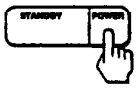


3 Press the AUTO PROGR ② button.



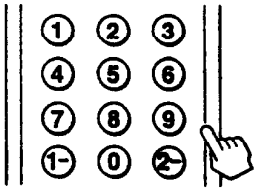
1-4. WATCHING THE TV

To switch on or off the TV



The power of the TV is turned on, or off completely.

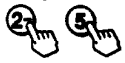
To select a channel



To select 8,

To select 10,

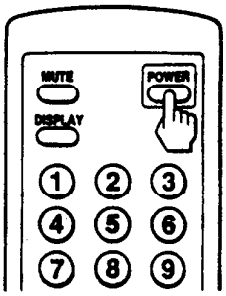
To select 25,



or

To adjust the volume

To set the TV to standby mode



To turn on the TV, press again.

You can operate on the TV using the buttons of the same name.

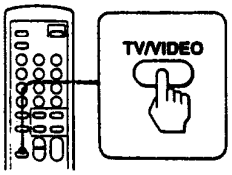
KV-1405GE—Use the PROGR +/– and VOLUME +/– buttons on the TV.
Standby mode is not available.

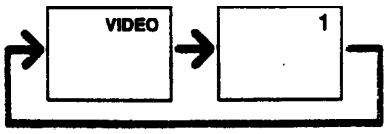
For personal listening, an earphone can be connected to the Ⓟ jack.

1-5. WATCHING THE VIDEO INPUT

1 Press the TV/VIDEO button.

2 Set the VTR to playback mode.





To return to TV mode
Press the TV/VIDEO button.

Note

Do not use the VTRs connected to the front and rear A/V connectors simultaneously. When you use a VTR, turn off or disconnect another VTR.

KV-1405GE/1415AS

Presetting to watch the video input

1 Play back the VTR.

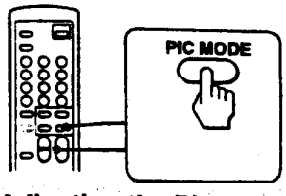
2 Preset a channel in program number "0" (see "Manual Presetting" on page 6).

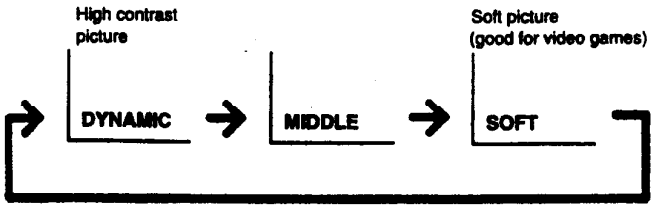
Watching the video input
Select channel "0".

1-6. ADJUSTMENT

Selecting the Picture Mode

Press the PIC MODE button.

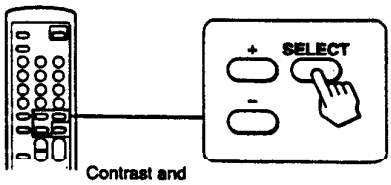


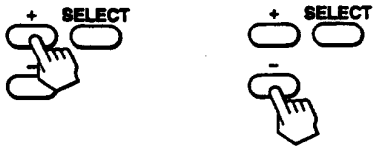


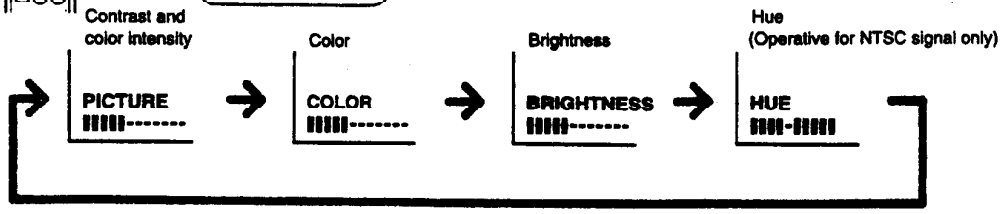
Adjusting the Picture to Your Preference

1 Select the adjustment item using the SELECT button on the Remote Commander (or ANALOG SELECT button on the TV).

2 Adjust using the + and – buttons.



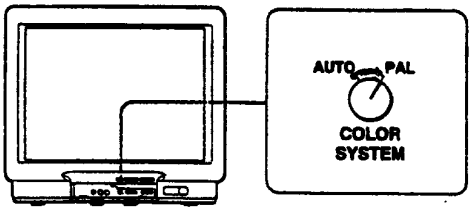




Note

If you change the PIC MODE setting after the above adjustments, the adjustment changes in accordance with the PIC MODE setting.

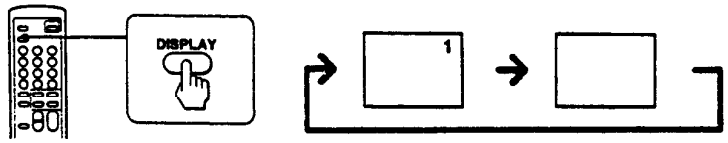
To set COLOR SYSTEM



Normally set COLOR SYSTEM to AUTO
If the color reproduction is abnormal (for example, the picture turns red or blue) while receiving PAL and PAL 60 playback signal, set to PAL. The picture color will become normal.

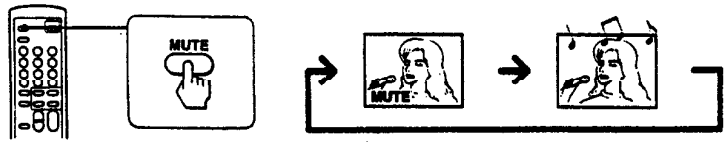
Turning On or Off the On-screen Display

Press the DISPLAY button.



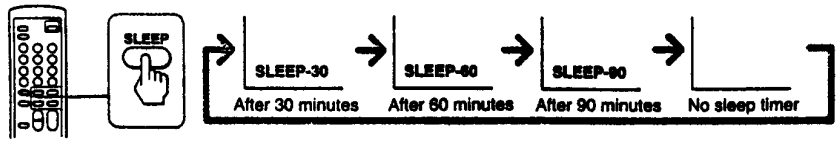
Muting (Except for KV-1405GE)

Press the MUTE button.



Setting the Sleep Timer (Except for KV-1405GE)

The TV will be turned off after about 30, 60, or 90 minutes.
Press the SLEEP button.



To cancel the sleep timer
Press the SLEEP button until the sleep indication disappears.

1-7. ADDITIONAL PRESETTING

Manual Presetting

To change the program number for a channel, or to receive a channel of weak signal, preset the channel manually.

Example: To preset a channel in program number 8

1 Press the PRESET ON/OFF button.

2 Press the PROGR +/– button until "8" appears.

3 Press the MANUAL PROGR +/– buttons until the channel you want appears.

4 Press the PRESET ON/OFF button.

To preset other channels, repeat steps 1 through 4.

Skipping Program Positions

You can skip the unused or undesired program position when you are selecting a program using the PROGR +/– buttons.

Example: To skip the program position 8

1 Press the PROGR +/– buttons until "8" appears.

2 Press the PRESET ON/OFF button.

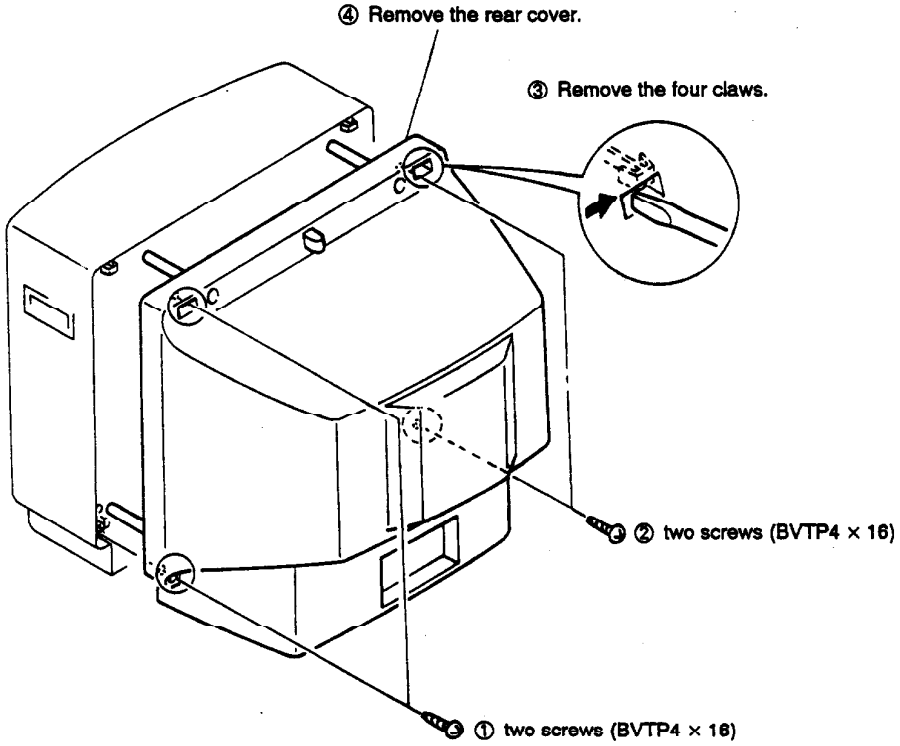
3 Press the PIC MODE button.
Repeat steps 1 through 3 to skip other program position.

4 Press the PRESET ON/OFF button.

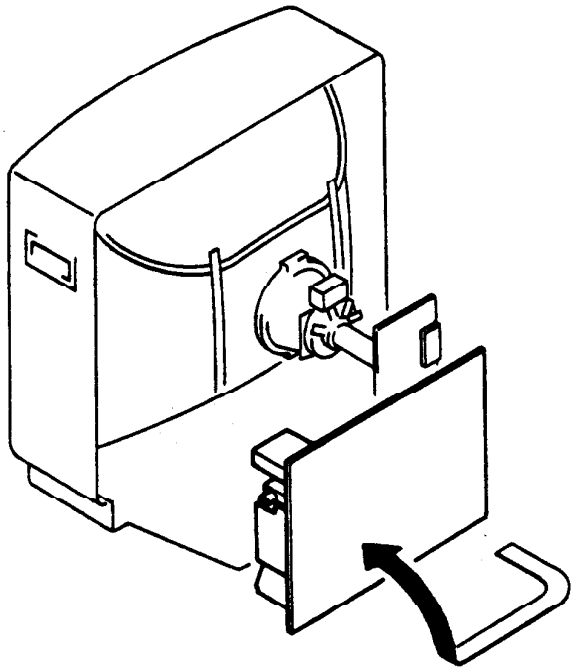
To restore the skipped program position
Preset the station manually as described in "Manual Presetting", or preset automatically again.

SECTION 2
DISASSEMBLY

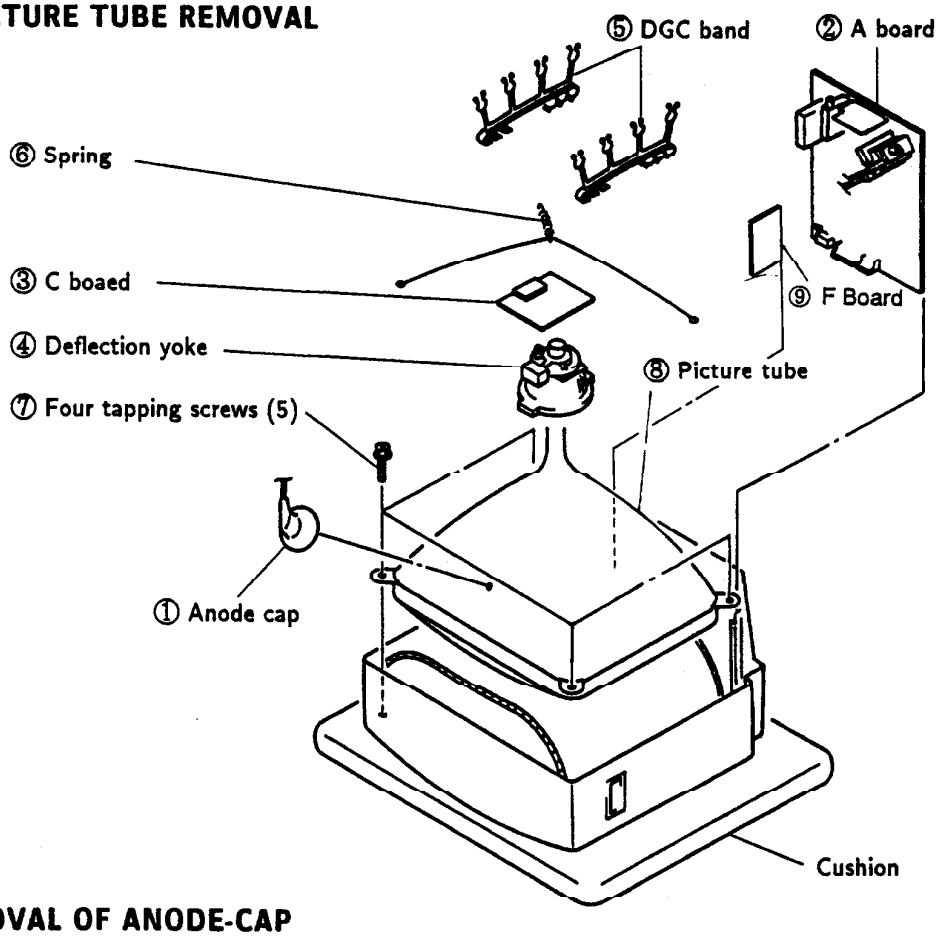
2-1. REAR COVER REMOVAL



2-2. SERVICE POSITION



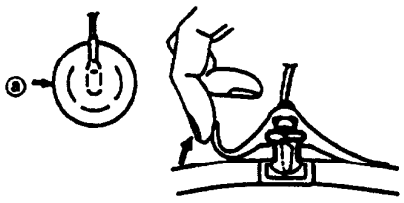
2-3. PICTURE TUBE REMOVAL



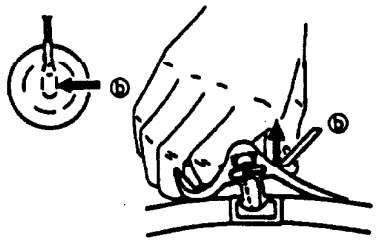
• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

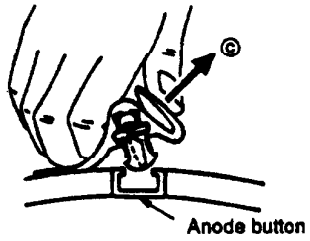
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



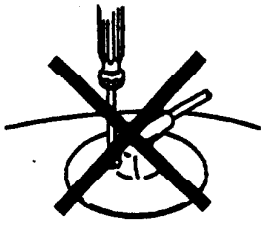
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

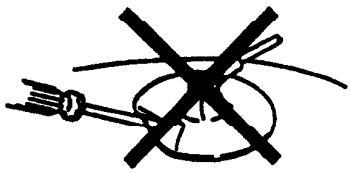
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

● The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

● These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and switch should be set as follows unless otherwise noted :

PICTURE control..... normal

BRIGHTNESS control..... normal

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G 2) and White Balance

Note: Test Equipment Required.

1. Color bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter

Preparation:

● Feed in the white pattern signal.

● Before starting, degauss the entire screen.

3-1. BEAM LANDING

1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.2
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are at the sides evenly. (Fig.3)
5. Move the deflection yoke forward, and adjust so that the entire screen becomes green. (Fig.1)
6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. When landing at the corner is not right, adjust by using the disk magnets. (Fig.4)

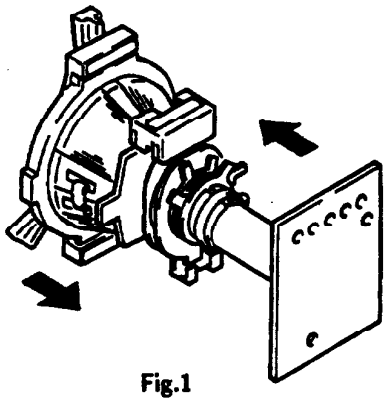


Fig.1

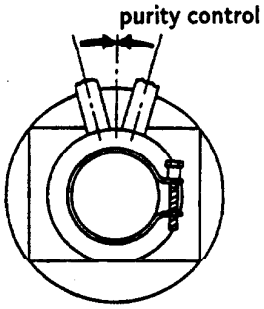


Fig.2

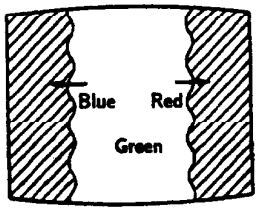


Fig.3

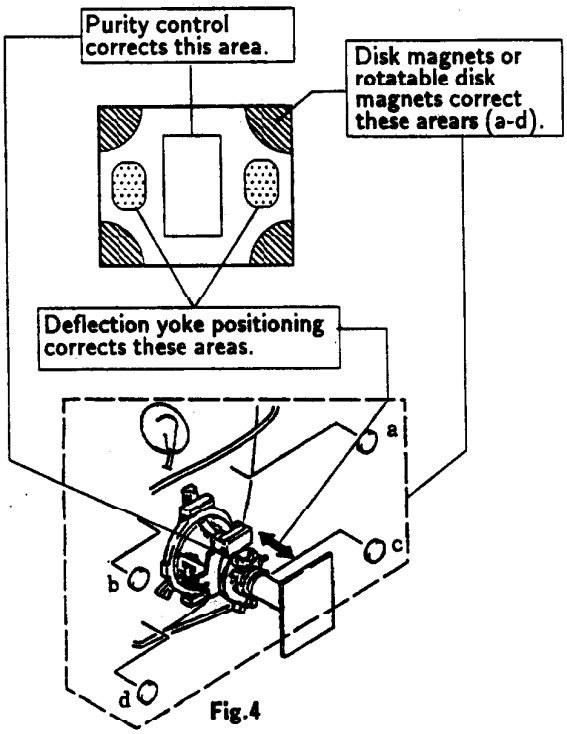


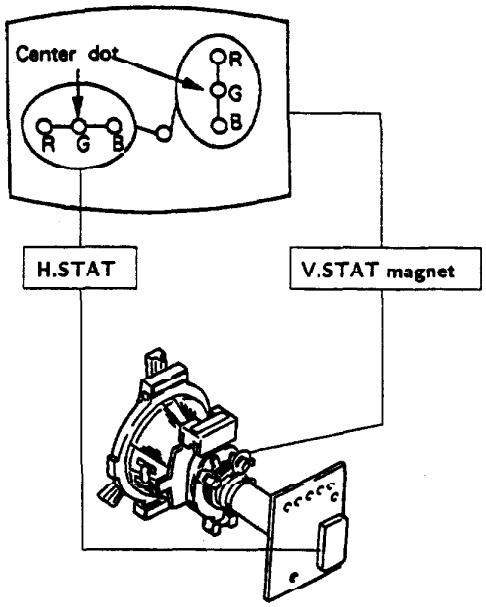
Fig.4

3-2. CONVERGENCE

Preparation:

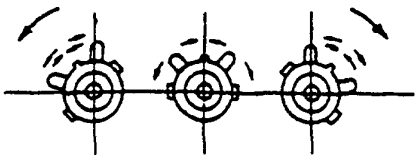
- Before starting, perform FOCUS, H.SIZE, V.LIN and V.SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in dot pattern.

(1) Horizontal and Vertical Static Convergence

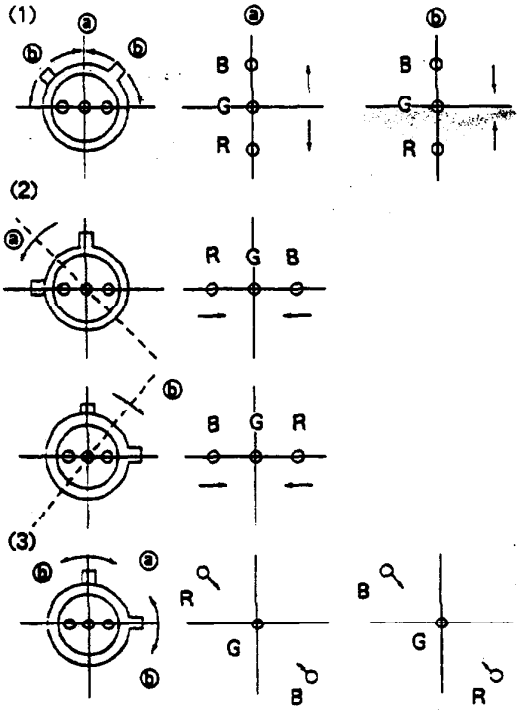


1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen.(Horizontal movement)
2. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
3. If the red, green and blue dots do not converge on the center of screen with H.STAT VR, perform horizon-tal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)

- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4.When the V.STAT magnet is moved in the direction of arrow ⓐ and ⓑ, red, green and blue dots move as shown below.

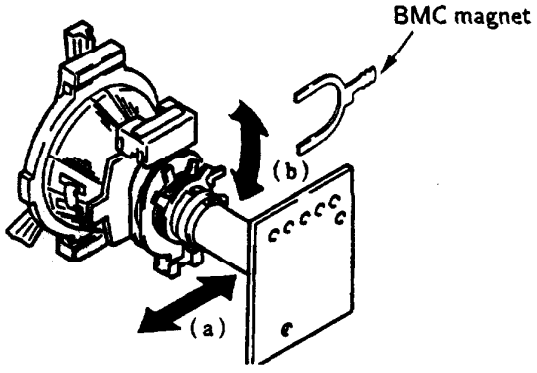


If the blue dot does not converge with red and green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.

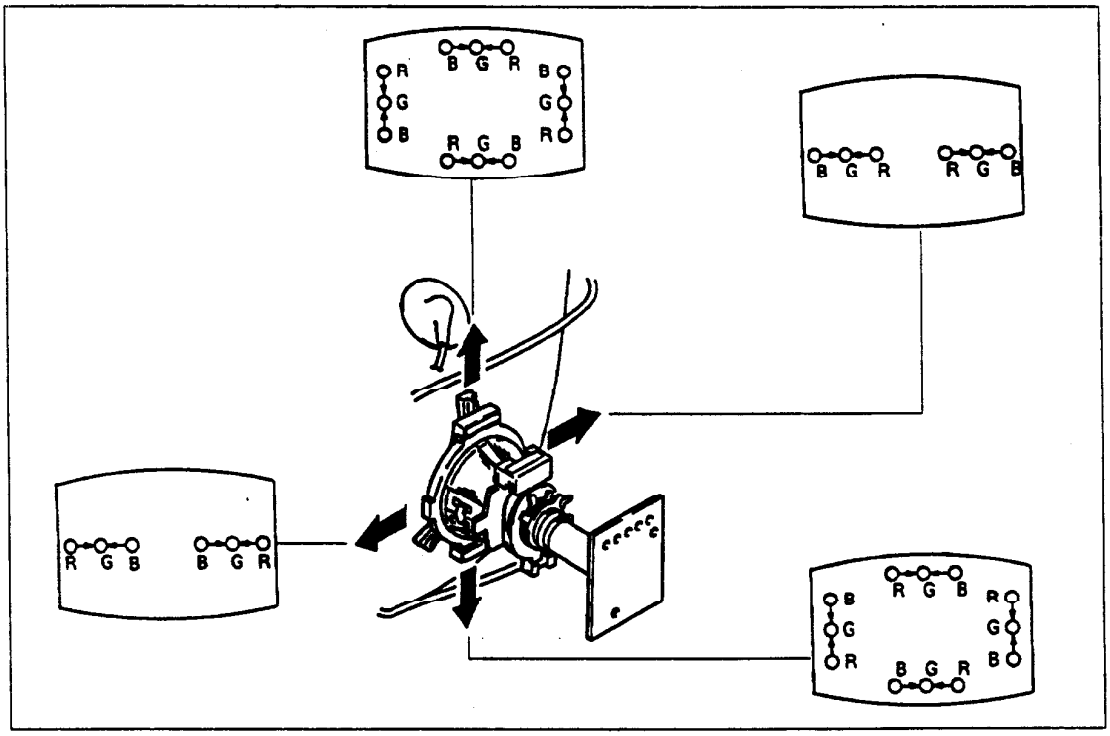


(2)Dynamic Convergence Adjustment

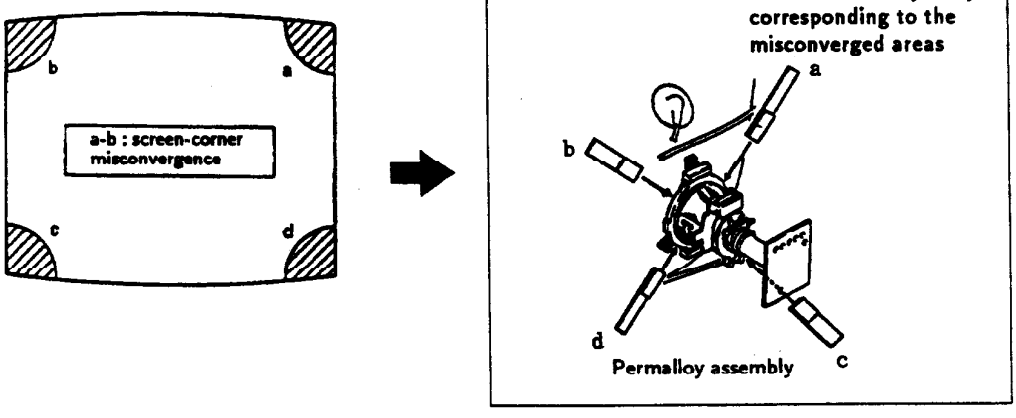
Preparation:

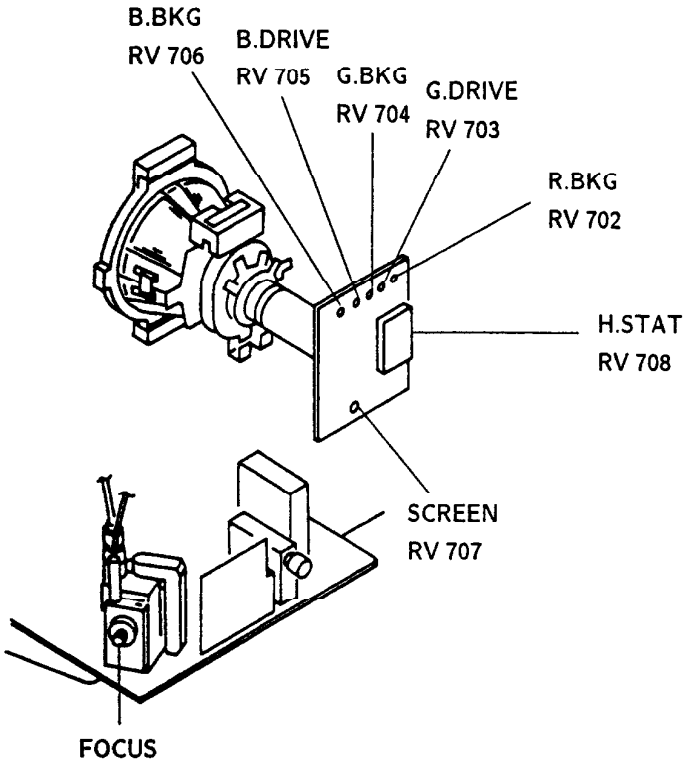
- Before starting perform Horizontal and Vertical static convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



(3) Screen-corner Convergence





3-3. FOCUS

Adjust FOCUS control for best picture.

3-4. SCREEN(G 2) and WHITE BALANCE

[SCREEN(G2)]

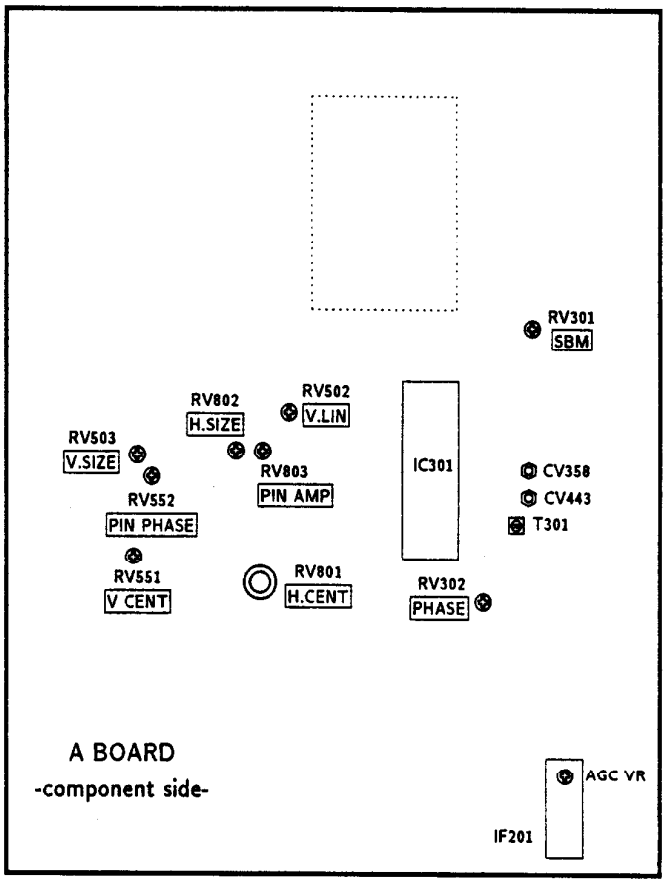
1. Input a dots pattarn.
2. Set the PIC, BRT controls at minimum and COLOR control at 50%.
3. Confirm the BKG voltage is less than 165 Vdc when turning RV 706 (B.BKG), RV 704 (G.BKG) and RV 702 (R.BKG).
4. Note the color when becomes visible first when turning RV707 (SCREEN).

[WHITE BALANCE]

1. Input a all white signl.
2. Set the PIC control to minimum and set the BRT control at normal.
3. Turn RV 703 (G.DRIVE) and RV 705 (B.DRIVE) fully clockwise.
4. Adjust BKG controls for best white balance.
5. Set the PICTURE control to maximum. Observe the screen and adjust the DRIVE controls for best white balance.
6. Repeat steps 4 and 5.

SECTION 4
CIRCUIT ADJUSTMENT

4-1. A BOARD ADJUSTMENTS



RF AGC ADJUSTMENT (IF201)

1. Receive a strong off-air signals.
2. Adjust RF AGC VR control so that snow noise and cross-modulation just disappear from the picture.

A • P • C ADJUSTMENT (CV443)..... (PAL)

1. Short circuit between pin ④ and pin ㊼ of IC301 with jumper.
2. Input the PAL color-bar signal.
3. Set the PIC, COL, and BRT controls to normal.
4. Adjust CV443 for suitable color intensity.
5. Remove a jumper.

A • P • C ADJUSTMENT (CV358)..... (NTSC)

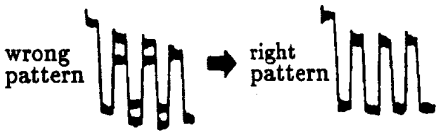
1. Short circuit between pin ④ and pin ㊼ of IC301 with a jumper.
2. Input NTSC 3.58 color-bar signal.
3. Set the PIC, COL and BRT controls to normal.
4. Adjust CV358 for suitable color intensity.
5. Remove the jumper.

ANTI PAL, LINE CRAWLING ADJUSTMENT (RV301,RV302,T301)

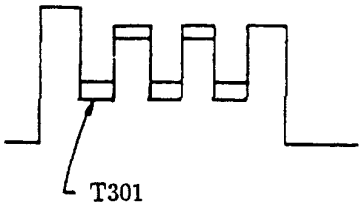
• ANTI PAL ADJUSTMENT

1. Input the PAL color-bar signal.
2. Set the PIC,COL and BRT controls to normal.
3. Connect the oscilloscope to pin ③ of A-1 connector.
4. Adjust RV301 (DELAY) and RV302(PHASE) to obtain the waveform as shown below.

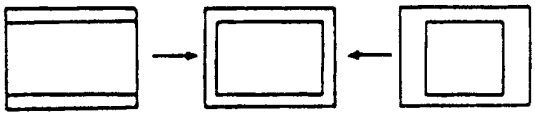
• LINE CRAWLING ADJUSTMENT



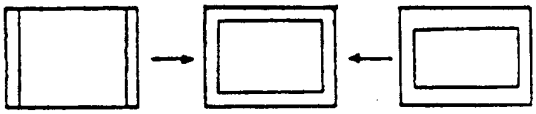
1. Input the PAL color-bar signal.
2. Set the PIC,COL and BRT controls to normal.
3. Connect the oscilloscope to pin ③ of A-1 connector.
4. Adjust T301 for minimum line crawling.



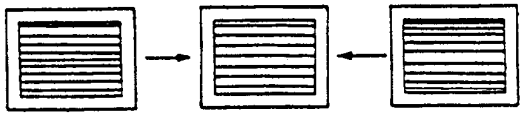
RV802 H.SIZE (HORIZONTAL SIZE)



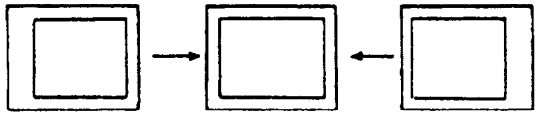
RV503 V.SIZE (VERTICAL SIZE)



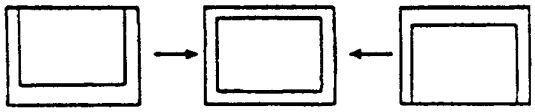
RV502 V.LIN (VERTICAL LINEARITY)



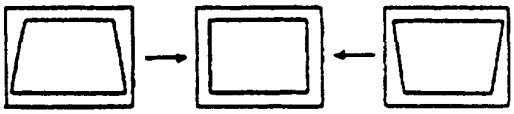
RV801 H.CENT (HORIZONTAL CENTER)



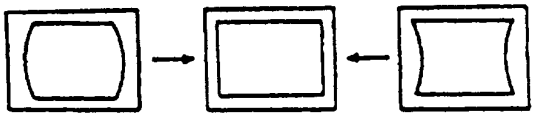
RV551 V.CENT (VERTICAL CENTER)



RV552 PIN PHASE (PINCUSHION PHASE)



RV803 PIN AMP (PINCUSHION AMPLIFIER)



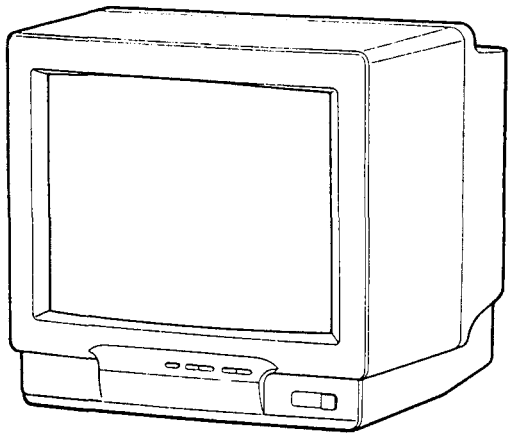
KV-2185MT/2185MTJ

RM-827S

SERVICE MANUAL

ME Model

KV-2185MT
Chassis No. SCC-F21B-A
KV-2185MTJ
Chassis No. SCC-F21A-A



G 3 E CHASSIS

MODELS OF THE SAME SERIES
KV-2185MTJ/1485MTJ/MTJ
KV-1487MT/1487PD

SPECIFICATIONS

Power requirements 110–240 V AC, 50/60 Hz
Power consumption Indicated on the rear of the TV
Color system PAL, PAL60, NTSC4.43, NTSC3.58, SECAM
Television system and Channel coverage

Television system	M	B/G	I	D/K
Low VHF band	A2–A6	E2–E4	–	R1–R5
High VHF band	A7–A13	E5–E12	–	R6–R12
UHF	A14–A79	E21–E69	B21–B68	R21–R60
CATV	–	S01–S03 S1–S20	–	–

Audio output 3 W
Inputs Antenna: 75 ohms
VIDEO INPUT jacks: phono jacks
Video: 1 Vp-p, 75 ohms
Audio: 500 mVrms, high impedance
Picture tube Approx. 54 cm (21 inches)
Dimensions Approx. 520 × 462.5 × 486 mm (w/h/d)
Weight Approx. 24 Kg

Design and specifications are subject to change without notice.

TRINITRON® COLOR TV

SONY®

MICROFILM

TABLE OF CONTENTS

Section	Title	Page
1. GENERAL		
1-1.	Antenna Connection	3
1-2.	Connecting VTR or Other Equipment	4
1-3.	Preset the Channels Automatically	4
1-4.	Watching the TV	5
1-5.	Watching the Video Input	5
1-6.	Adjustment	6
1-7.	Additional Presetting	7
2. DISASSEMBLY		
2-1.	Rear Cover Removal	8
2-2.	Service Position	8
2-3.	Picture Tube Removal	9
3. SET-UP ADJUSTMENTS		
3-1.	Beam Landing	10
3-2.	Convergence	11
3-3.	Focus	13
3-4.	Screen (G2) and White Balance	13
4. CIRCUIT ADJUSTMENT		
4-1.	A Board Adjustments	14
5. DIAGRAMS		
5-1.	Circuit Boards Location	17
5-2.	Schematic Diagrams and Printed Wiring Boards	
(1)	Schematic Diagram of A Board	18
(2)	Schematic Diagram of C Board	24
5-3.	Semiconductors	26
6. EXPLODED VIEW		27
7. ELECTRICAL PARTS LIST		28

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

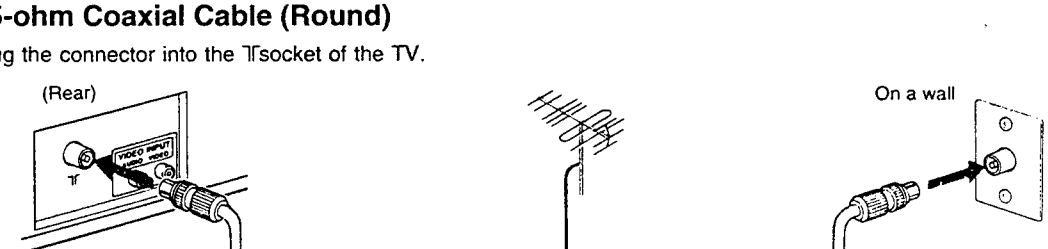
SECTION 1
GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.

1-1. ANTENNA CONNECTION

To connect a VHF antenna or a combination VHF/UHF antenna– 75-ohm Coaxial Cable (Round)

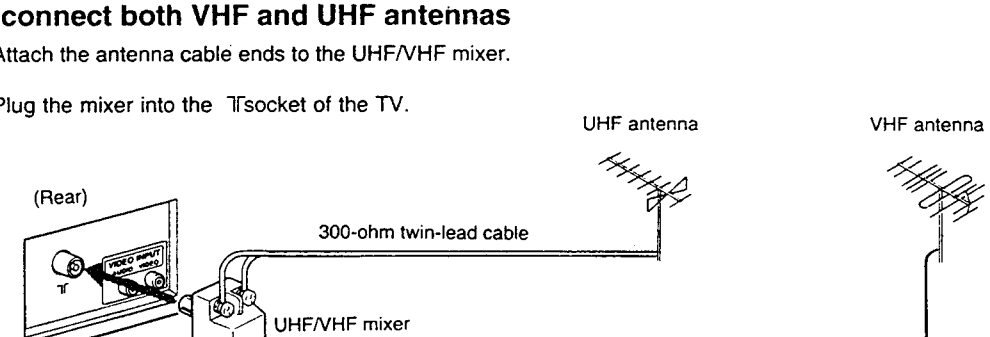
Plug the connector into the 1socket of the TV.



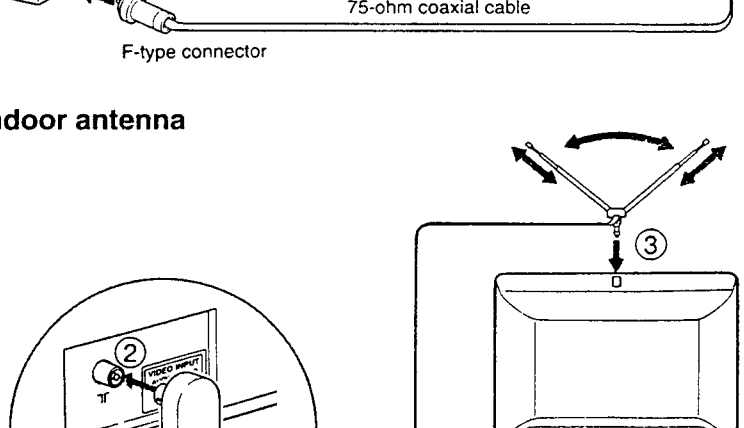
To connect both VHF and UHF antennas

1 Attach the antenna cable ends to the UHF/VHF mixer.

2 Plug the mixer into the 1socket of the TV.



To connect the indoor antenna

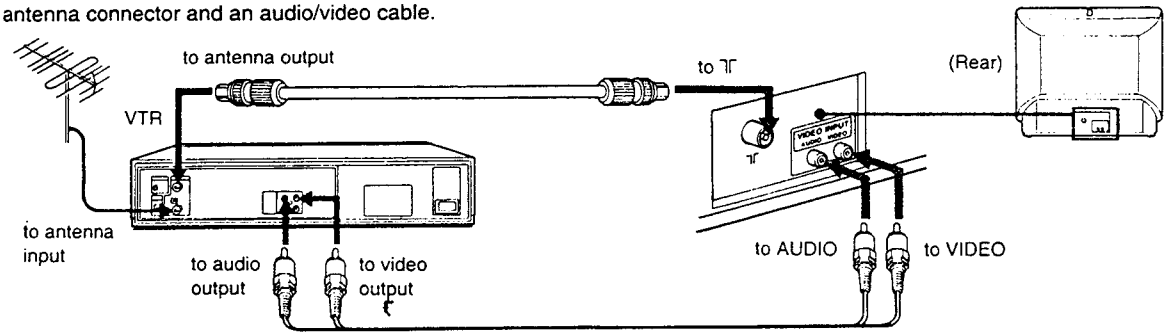


We recommend using an outdoor antenna for better reception.

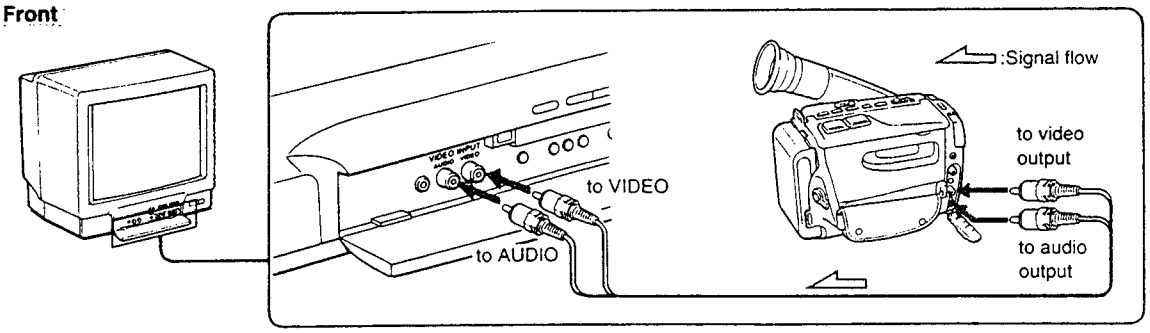
1-2. CONNECTING VTR OR OTHER EQUIPMENT

Rear

You can connect the antenna through VTR. Use an IEC antenna connector and an audio/video cable.

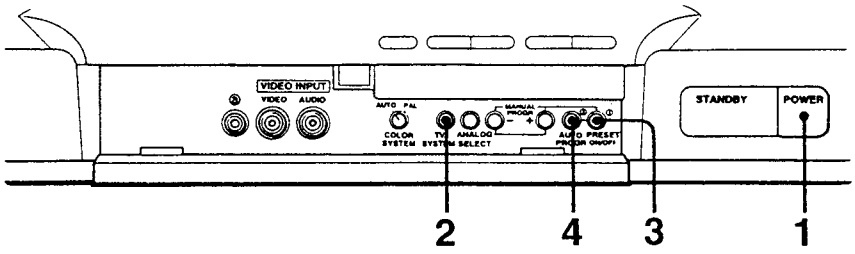


Front

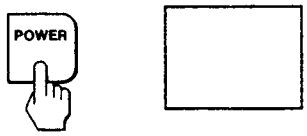


1-3. PRESET THE CHANNELS AUTOMATICALLY

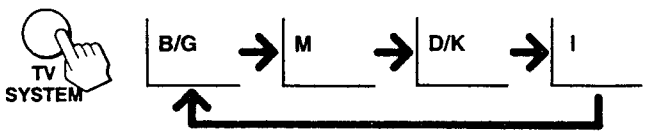
Up to 30 channels (1 to 29, 0) can be preset in numerical sequence from program number 1.



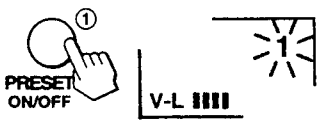
1 Press the POWER button.



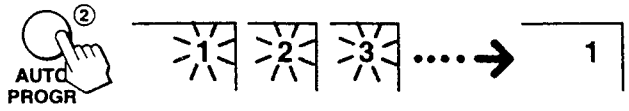
2 Press the TV SYSTEM button to select your local TV system.



3 Press the PRESET ON/OFF ① button.



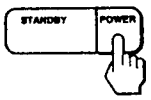
4 Press the AUTO PROGR ② button.



3

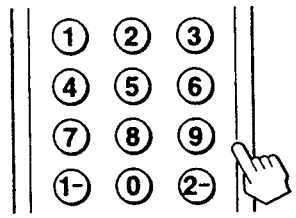
1-4. WATCHING THE TV

To switch on or off the TV



The power of the TV is turned on, or off completely.

To select a channel

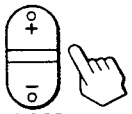


To select 8, 8

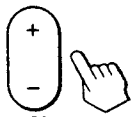
To select 10, 1- 0

To select 25, 2- 5

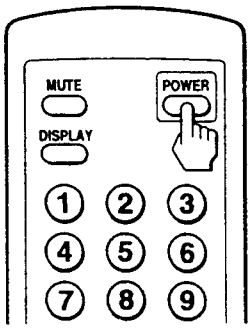
or



To adjust the volume



To set the TV to standby mode



To turn on the TV, press again.

You can operate on the TV using the buttons of the same name.

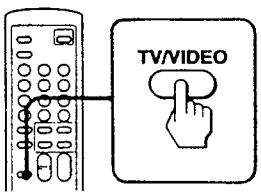
For personal listening, an earphone can be connected to the Ⓟ jack.

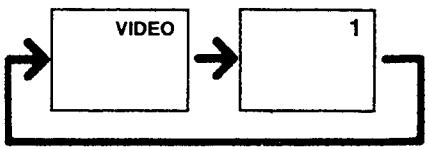
1-5. WATCHING THE VIDEO INPUT

1 Press the TV/VIDEO button.

2 Set the VTR to playback mode.

To return to TV mode
Press the TV/VIDEO button.





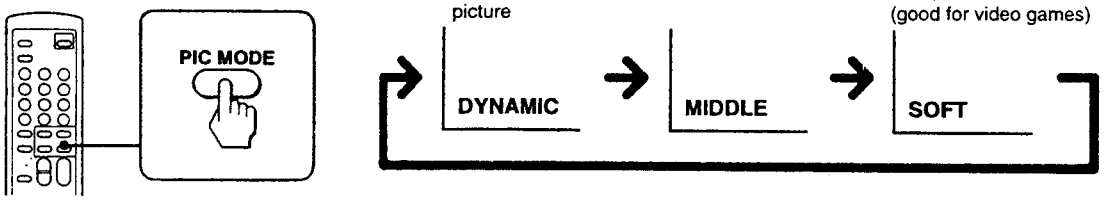
Note

Do not use the VTRs connected to the front and rear A/V connectors simultaneously. When you use a VTR, turn off or disconnect another VTR.

1-6. ADJUSTMENT

Selecting the Picture Mode

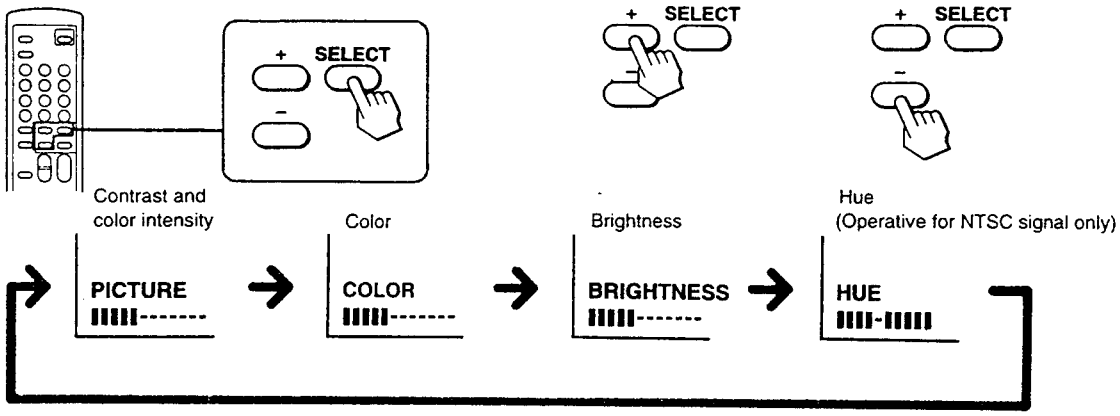
Press the PIC MODE button.



Adjusting the Picture to Your Preference

1 Select the adjustment item using the SELECT button on the Remote Commander (or ANALOG SELECT button on the TV).

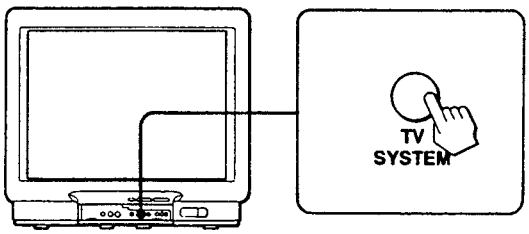
2 Adjust using the + and – buttons.



Note

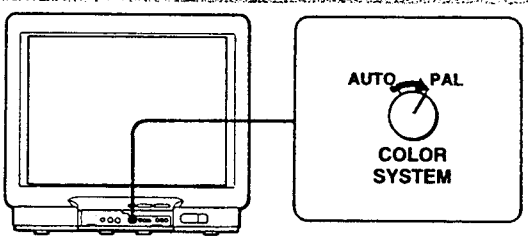
If you change the PIC MODE setting after the above adjustments, the adjustment changes in accordance with the PIC MODE setting.

To set TV SYSTEM



If the sound is distorted or noisy, or color is abnormal while receiving program through the VHF/UHF terminal, press TV SYSTEM until a clear sound or normal color is obtained. The TV system set by this operation is memorized for the program position.

To set COLOR SYSTEM

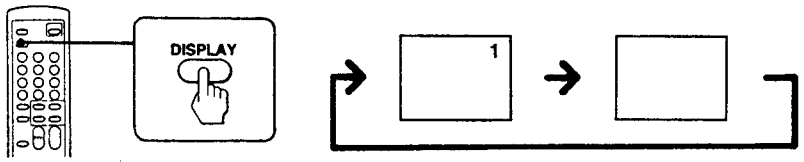


Normally set COLOR SYSTEM to AUTO.
If the color reproduction is abnormal (for example, the picture turns red or blue) while receiving PAL and PAL 60 playback signal, set to PAL. The picture color will become normal.

5

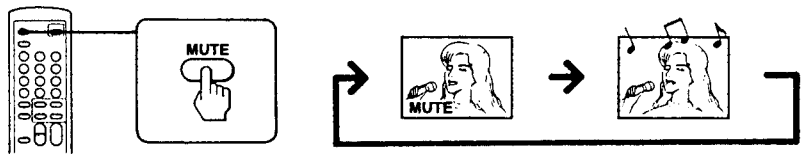
Turning On or OFF the On-screen Display

Press the DISPLAY button.



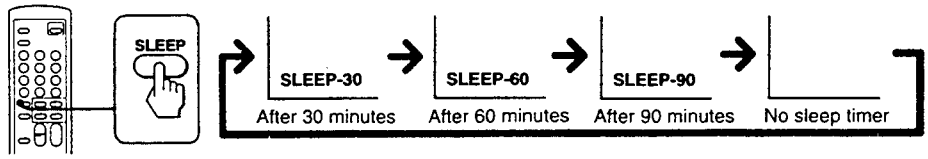
Muting

Press the MUTE button.



Setting the Sleep Timer

The TV will be turned off after about 30, 60, or 90 minutes.
Press the SLEEP button.



To cancel the sleep timer
Press the SLEEP button until the sleep indication disappears.

1-7. ADDITIONAL PRESETTING

Manual Presetting

To change the program number for a channel, or to receive a channel of weak signal, preset the channel manually.

Example: To preset a channel in program number 8

1 Press the PRESET ON/OFF button.

2 Press the PROGR +/– button until "8" appears.

3 Press the TV SYSTEM button to select your TV system.

4 Press the MANUAL PROGR +/– buttons until the channel you want appears.

5 Press the PRESET ON/OFF button.

To preset other channels, repeat steps 1 through 5.

Skipping Program Positions

You can skip the unused or undesired program position when you are selecting a program using the PROGR +/– buttons.

Example: To skip the program position 8

1 Press the PROGR +/– buttons until "8" appears.

2 Press the PRESET ON/OFF button.

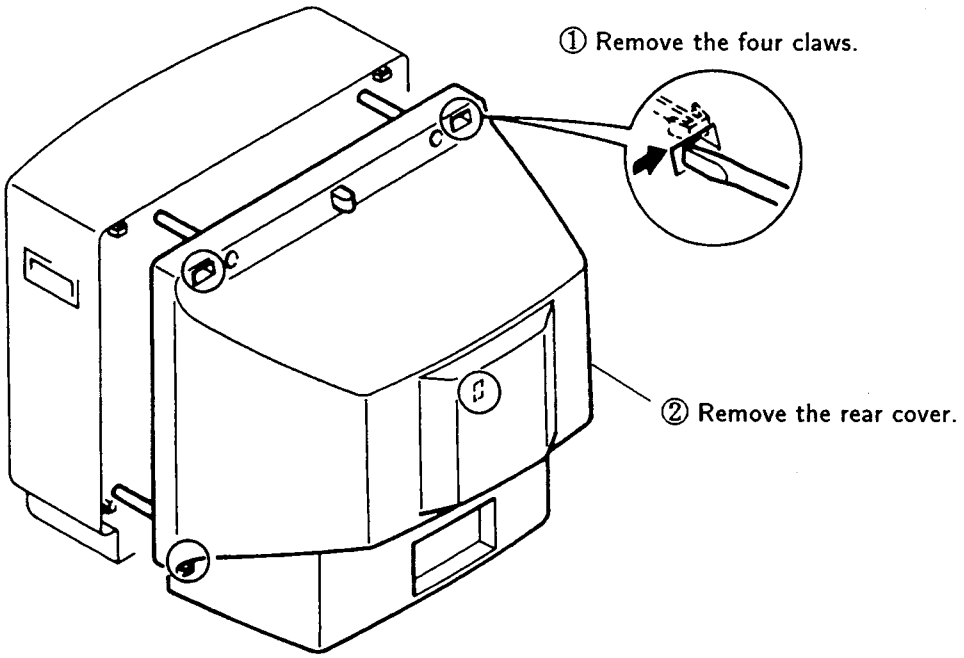
3 Press the PIC MODE button on the Remote Commander.
Repeat steps 1 through 3 to skip other program position.

4 Press the PRESET ON/OFF button.

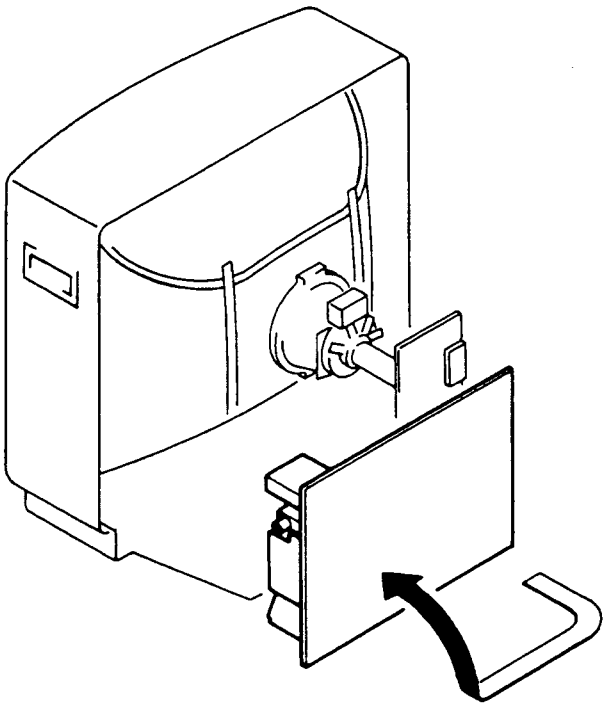
To restore the skipped program position
Preset the station manually as described in "Manual Presetting", or preset automatically again.

SECTION 2
DISASSEMBLY

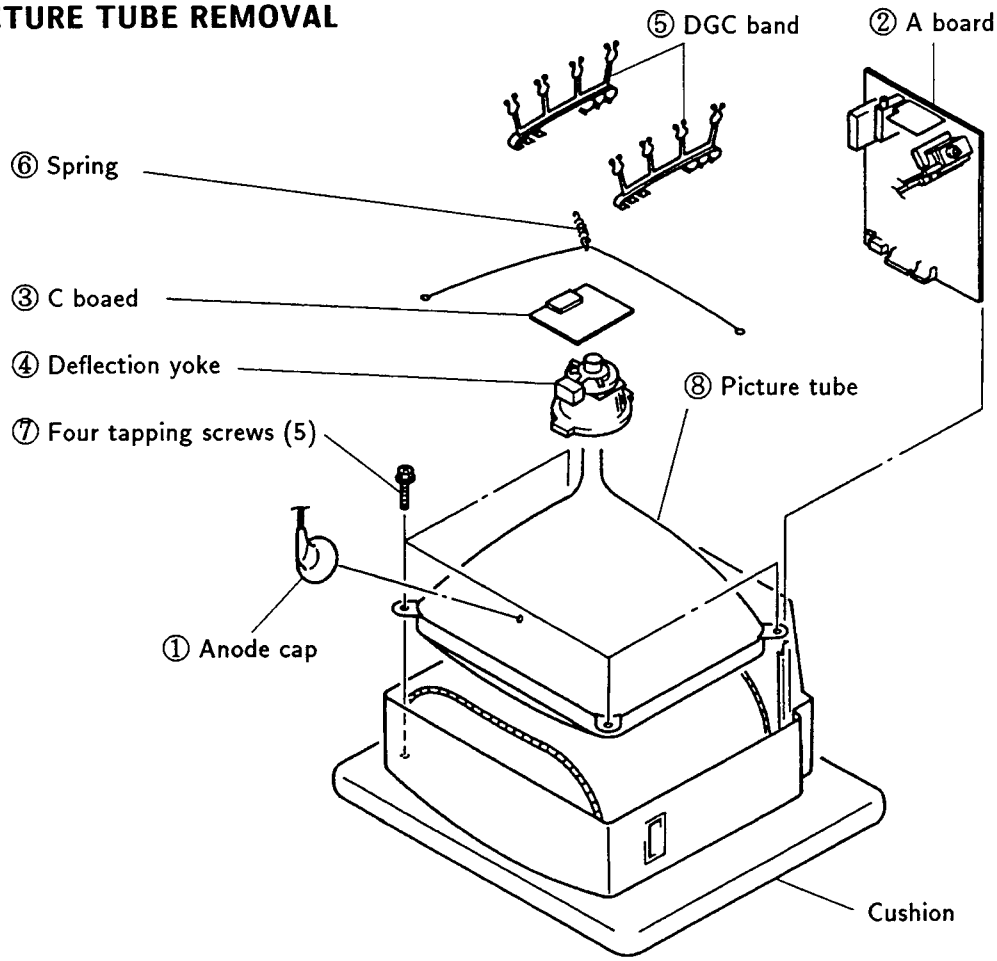
2-1. REAR COVER REMOVAL



2-2. SERVICE POSITION



2-3. PICTURE TUBE REMOVAL

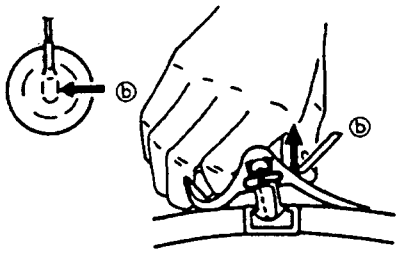


• REMOVAL OF ANODE-CAP

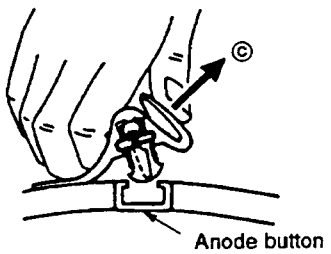
NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

• REMOVING PROCEDURES

① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



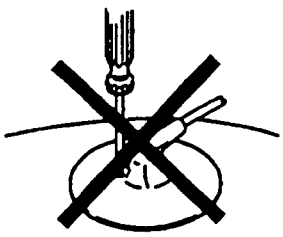
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

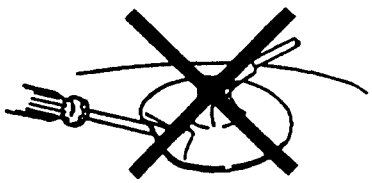
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

● The following adjustments should be made when a complete realignment is required or a new picture tube is installed.

● These adjustments should be performed with rated power supply voltage unless otherwise noted.

The controls and switch should be set as follows unless otherwise noted :

PICTURE control ..... normal

BRIGHTNESS control..... normal

Perform the adjustments in order as follows:

1. Beam Landing
2. Convergence
3. Focus
4. Screen (G 2) and White Balance

Note: Test Equipment Required.

1. Color bar Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter

Preparation:

● Feed in the white pattern signal.

● Before starting, degauss the entire screen.

3-1. BEAM LANDING

1. Input a raster signal with the pattern generator.
2. Loosen the deflection yoke mounting screw, and set the purity control to the center as shown in Fig.2
3. Turn the raster signal of the pattern generator to green.
4. Move the deflection yoke backward, and adjust with the purity control so that green is in the center and red and blue are at the sides evenly. (Fig.3)
5. Move the deflection yoke forward, and adjust so that the entire screen becomes green. (Fig.1)
6. Switch over the raster signal to red and blue and confirm the condition.
7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
8. When landing at the corner is not right, adjust by using the disk magnets. (Fig.4)

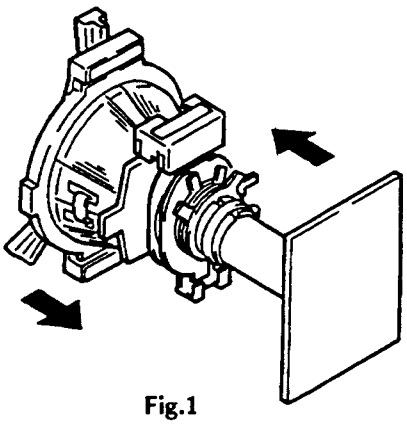


Fig.1

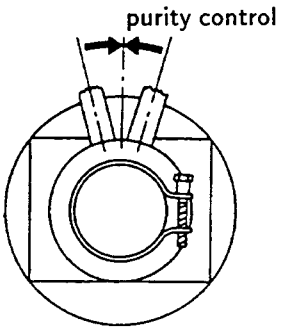


Fig.2

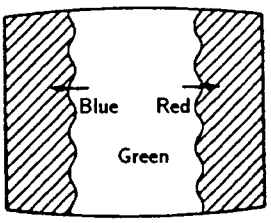


Fig.3

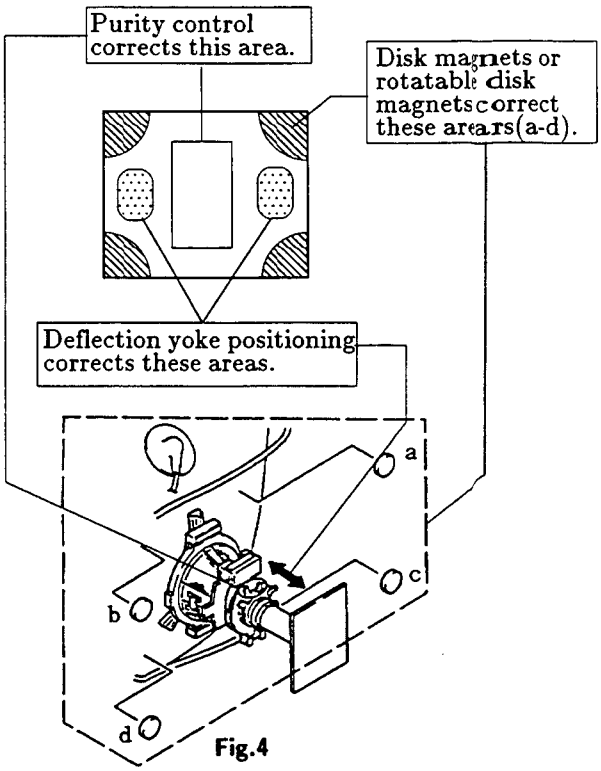


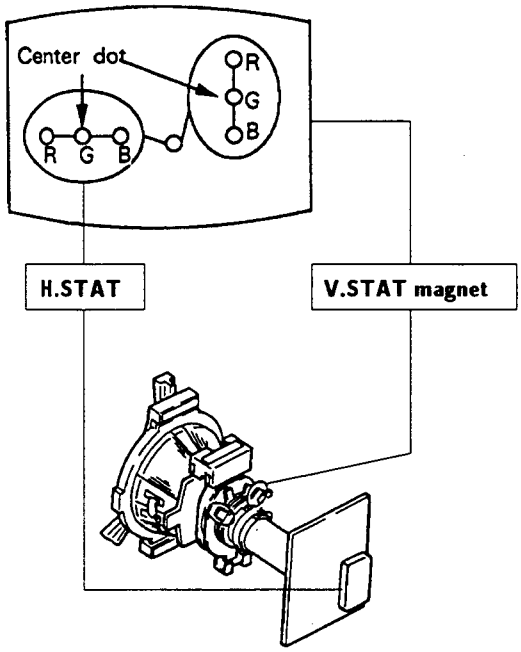
Fig.4

3-2. CONVERGENCE

Preparation:

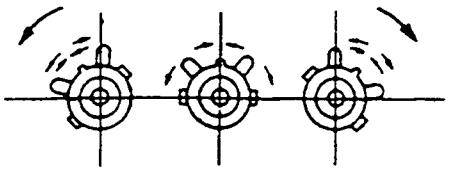
- Before starting, perform FOCUS, H.SIZE, V.LIN and V.SIZE adjustments.
- Set BRIGHTNESS control to minimum.
- Feed in dot pattern.

(1) Horizontal and Vertical Static Convergence

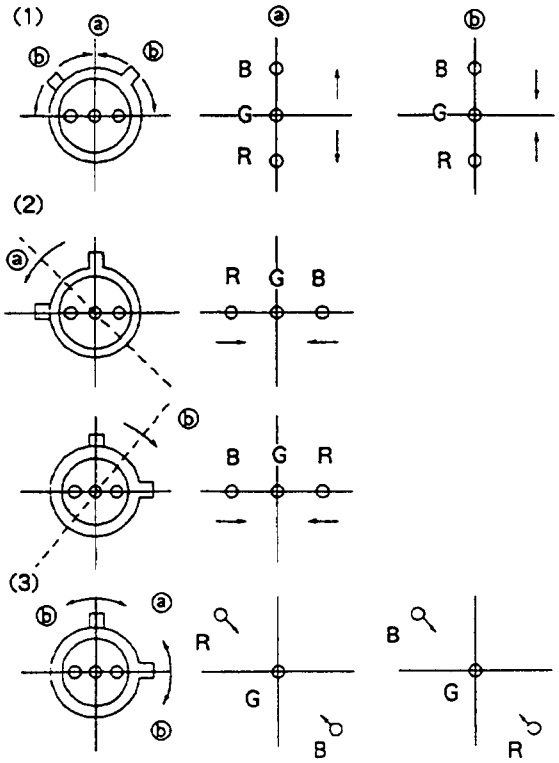


1. Adjust H.STAT VR to converge red, green and blue dots the in center of the screen.(Horizontal movement)
2. Adjust V. STAT magnet to converge red, green and blue dots in the center of the screen. (Vertical movement)
3. If the red, green and blue dots do not converge on the center of screen with H.STAT VR, perform horizon-tal convergence adjustment using H.STAT VR and V.STAT magnet as shown below. (In this case, H.STAT VR and V.STAT magnet effect each other.)

- Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



4.When the V.STAT magnet is moved in the direction of arrow ⓐ and ⓑ, red, green and blue dots move as shown below.

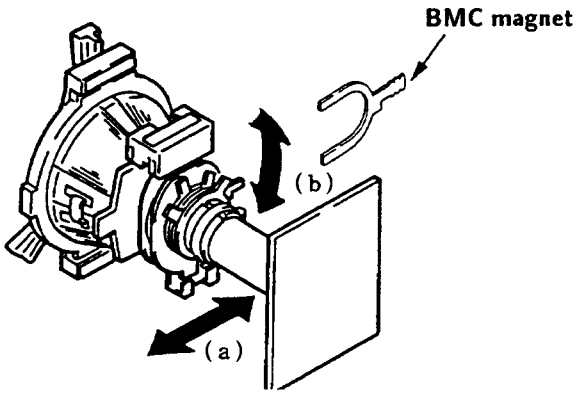


If the blue dot does not converge with red and green dots, perform following steps.

Move BMC magnet (a) to correct insufficient H.static convergence.

Rotate BMC magnet (b) to correct insufficient V.static convergence.

In either case, repeat Beam Landing Adjustment.

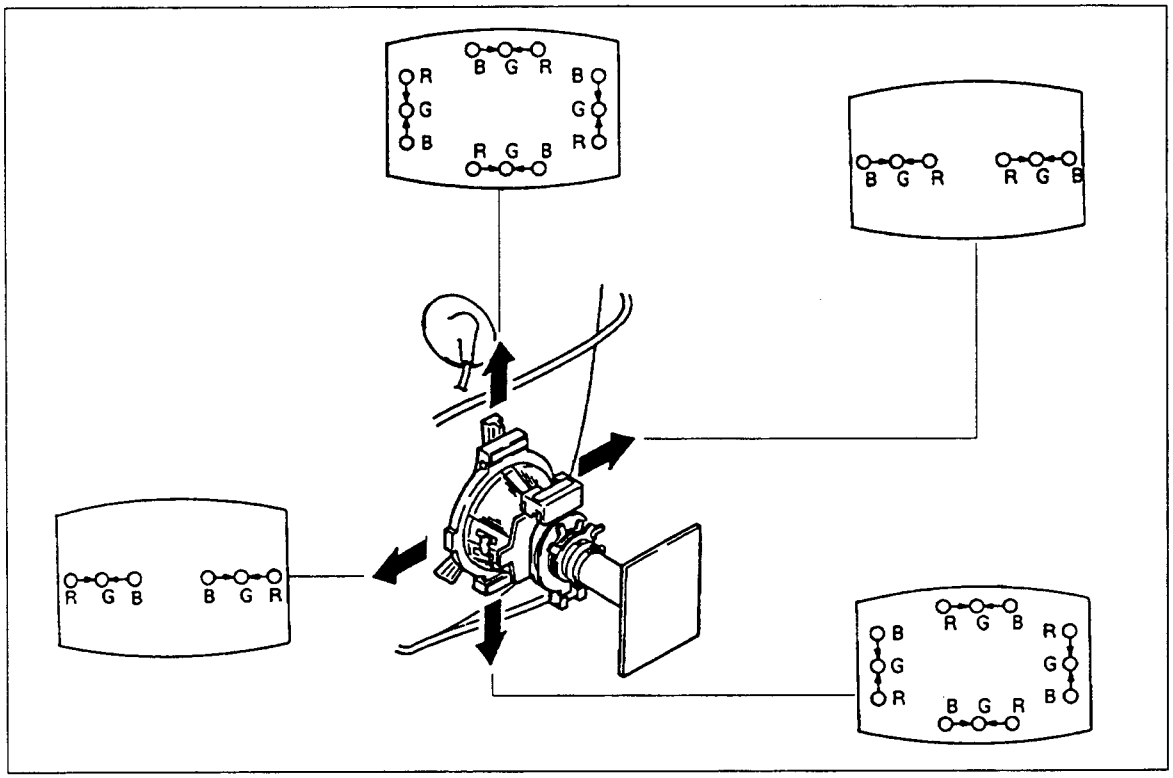


(2)Dynamic Convergence Adjustment

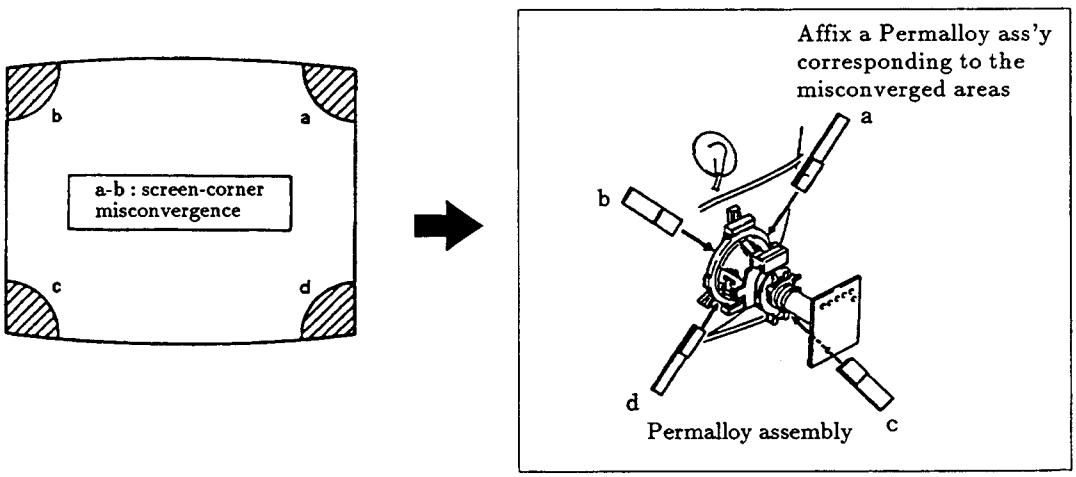
Preparation:

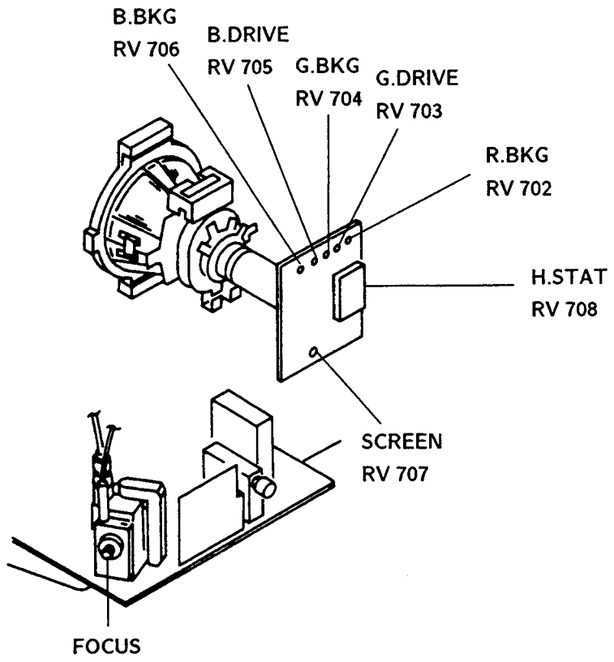
● Before starting perform Horizontal and Vertical static convergence Adjustment.

1. Slightly loosen deflection yoke screw.
2. Remove deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.



(3) Screen-corner Convergence





3-3. FOCUS

Adjust FOCUS control for best picture.

3-4. SCREEN(G 2) and WHITE BALANCE

[SCREEN(G2)]

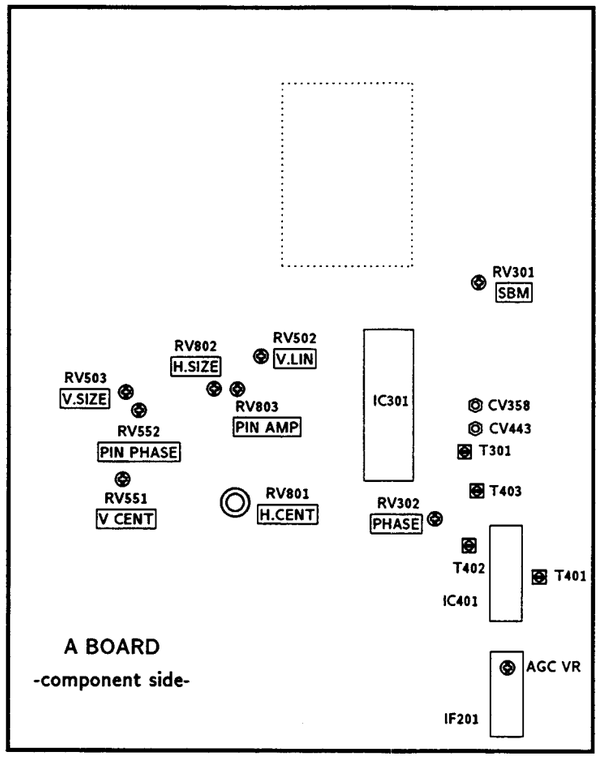
1. Input a dots pattarn.
2. Set the PIC, BRT controls at minimum and COLOR control at 50%.
3. Confirm the BKG voltage is less than 165 Vdc when turning RV 706 (B.BKG), RV 704 (G.BKG) and RV 702 (R.BKG).
4. Note the color when becomes visible first when turning RV707 (SCREEN).

[WHITE BALANCE]

1. Input a all white signl.
2. Set the PIC control to minimum and set the BRT control at normal.
3. Turn RV 703 (G.DRIVE) and RV 705 (B.DRIVE) fully clockwise.
4. Adjust BKG controls for best white balance.
5. Set the PICTURE control to maximum. Observe the screen and adjust the DRIVE controls for best white balance.
6. Repeat steps 4 and 5.

SECTION 4
CIRCUIT ADJUSTMENTS

4-1. A BOARD ADJUSTMENT



RF AGC ADJUSTMENT (IF201)

1. Receive a strong off-air signals.
2. Adjust RF AGC VR control so that snow noise and cross-modulation just disappear from the picture.

A • P • C ADJUSTMENT (CV443)..... (PAL)

1. Short circuit between pin ④ and pin ㊼ of IC301 with jumper.
2. Input the PAL color-bar signal.
3. Set the PIC, COL, and BRT controls to normal.
4. Adjust CV443 for suitable color intensity.
5. Remove a jumper.

A • P • C ADJUSTMENT (CV358)..... (NTSC)

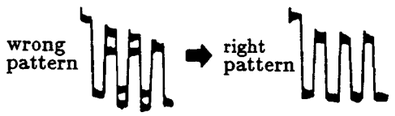
1. Short circuit between pin ④ and pin ㊼ of IC301 with a jumper.
2. Input NTSC 3.58 color-bar signal.
3. Set the PIC, COL and BRT controls to normal.
4. Adjust CV358 for suitable color intensity.
5. Remove the jumper.

ANTI PAL, LINE CRAWLING ADJUSTMENT (RV301,RV302,T301)

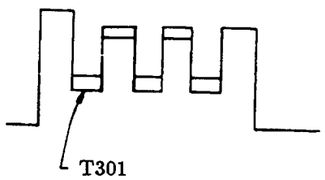
• ANTI PAL ADJUSTMENT

1. Input the PAL color-bar signal.
2. Set the PIC,COL and BRT controls to normal.
3. Connect the oscilloscope to pin ③ of A-1 connector.
4. Adjust RV301 (DELAY) and RV302(PHASE) to obtain the waveform as shown below.

• LINE CRAWLING ADJUSTMENT

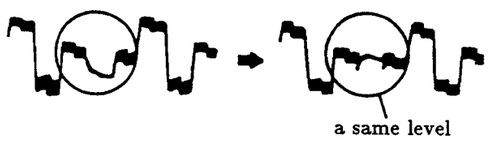


1. Input the PAL color-bar signal.
2. Set the PIC,COL and BRT controls to normal.
3. Connect the oscilloscope to pin ③ of A-1 connector.
4. Adjust T301 for minimum line crawling.



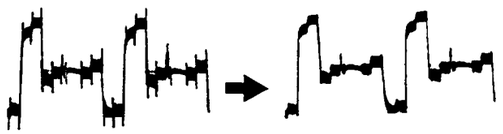
DISCRI ADJUSTMENT (T401,T402)

1. Input the SECAM color-bar signal.
2. Connect the dual-trace oscilloscope to the pin ⑪ (B-Y) and pin ⑩ (R-Y) of IC401.
3. Adjust T402 (R-Y) and T401 (B-Y) as shown the following figure.

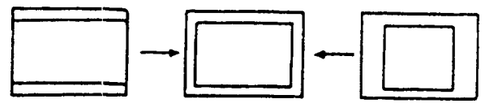


BELL FILTER ADJUSTMENT (T403)

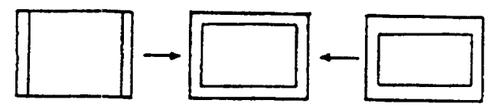
1. Input the SECAM color-bar signal.
2. Connect the oscilloscope to pin ⑩ (R-Y) of IC 401.
3. Adjust T403 as shown the following figure.



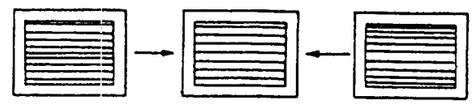
RV802 H.SIZE (HORIZONTAL SIZE)



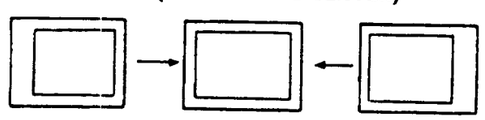
RV503 V.SIZE (VERTICAL SIZE)



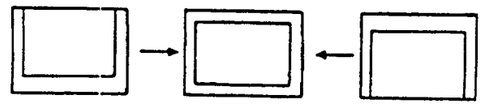
RV502 V.LIN (VERTICAL LINEARITY)



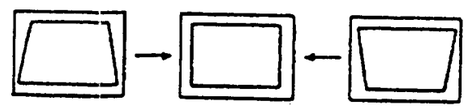
RV801 H.CENT (HORIZONTAL CENTER)



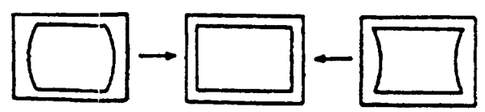
RV551 V.CENT (VERTICAL CENTER)



RV552 PIN PHASE (PINCUSHION PHASE)

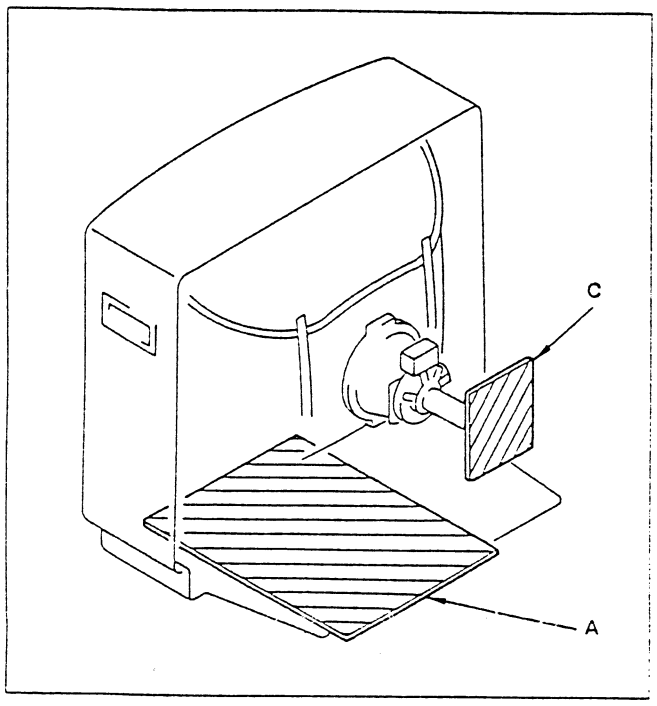


RV803 PIN AMP (PINCUSHION AMPLIFIER)



SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION



5-2. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  kΩ =1000Ω , MΩ =1000kΩ
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power ¼ W

- : nonflammable resistor.
- △ : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-chassis.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

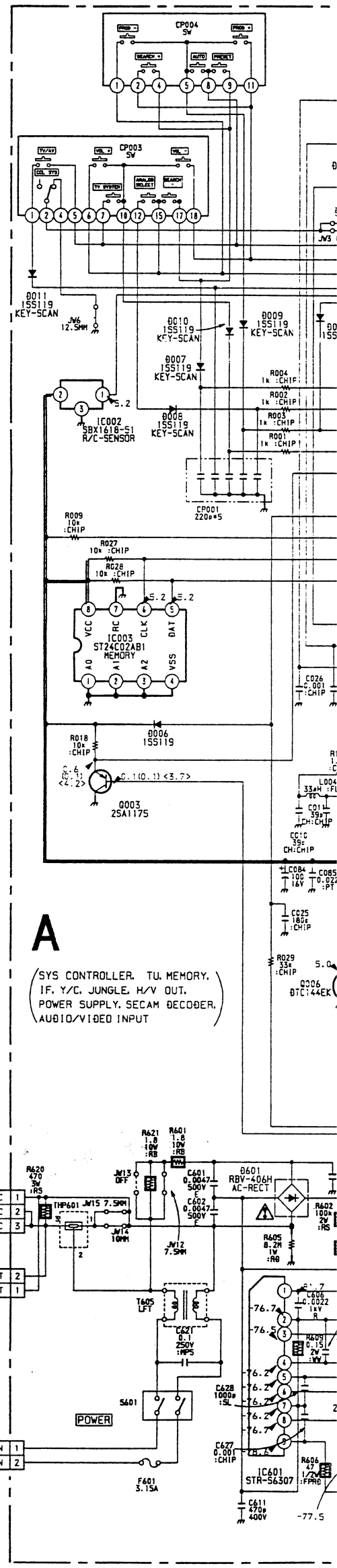
- Readings are taken with a color-bar signal input.
  no mark : with PAL color-bar signal received.
  ( ) : with SECAM color-bar signal received.
  〈 〉 : with NTSC3.58 color-bar signal received.
- Readings are taken with a 10MΩ digital multimeter.
- Voltage are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)

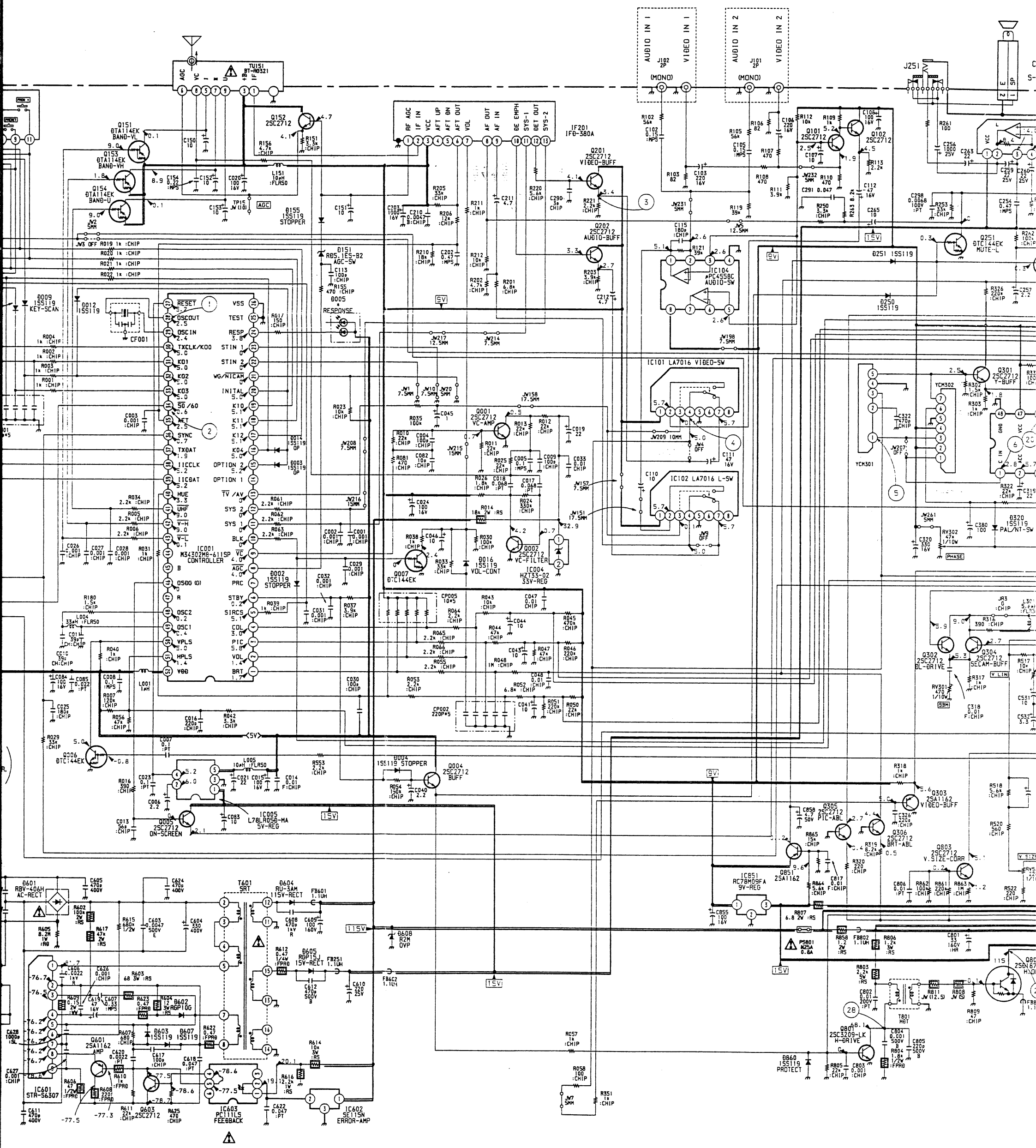
• A BOARD WAVEFORMS

① 6.0Vp-p (4.0MHz)	② 0.6Vp-p (H)	③ 1.9Vp-p (H)
④ 1.9Vp-p (H)	⑤ PAL, NTSC 0.5 Vp-p (H)	⑥ PAL, NTSC 0.5 Vp-p (H)
⑦ PAL 0.3Vp-p (H)	⑧ PAL 0.45 Vp-p (H)	⑨ PAL 0.6 Vp-p (H)
⑩ 0.26 Vp-p(4.43MHz)	⑪ 0.16Vp-p(3.58MHz)	⑫ 1.5Vp-p (H)
⑬ 2.4Vp-p (V)	⑭ 4.0Vp-p (H)	⑮ 2.0Vp-p (H)
⑯ 1.8Vp-p (H)	⑰ 4.0Vp-p (H)	⑱ 4.0Vp-p (H)
⑲ 4.0Vp-p (H)	⑳ 0.9Vp-p (H)	㉑ SECAM 0.24Vp-p (H)
㉒ SECAM 1.0Vp-p (H)	㉓ SECAM 1.4 Vp-p (H)	㉔ SECAM 3.3 Vp-p (H)
㉕ 50 Vp-p (V)	㉖ 1.5 Vp-p (V)	㉗ 900 Vp-p (H)
㉘ 170 Vp-p(H)	㉙ 10 Vp-p (V)	

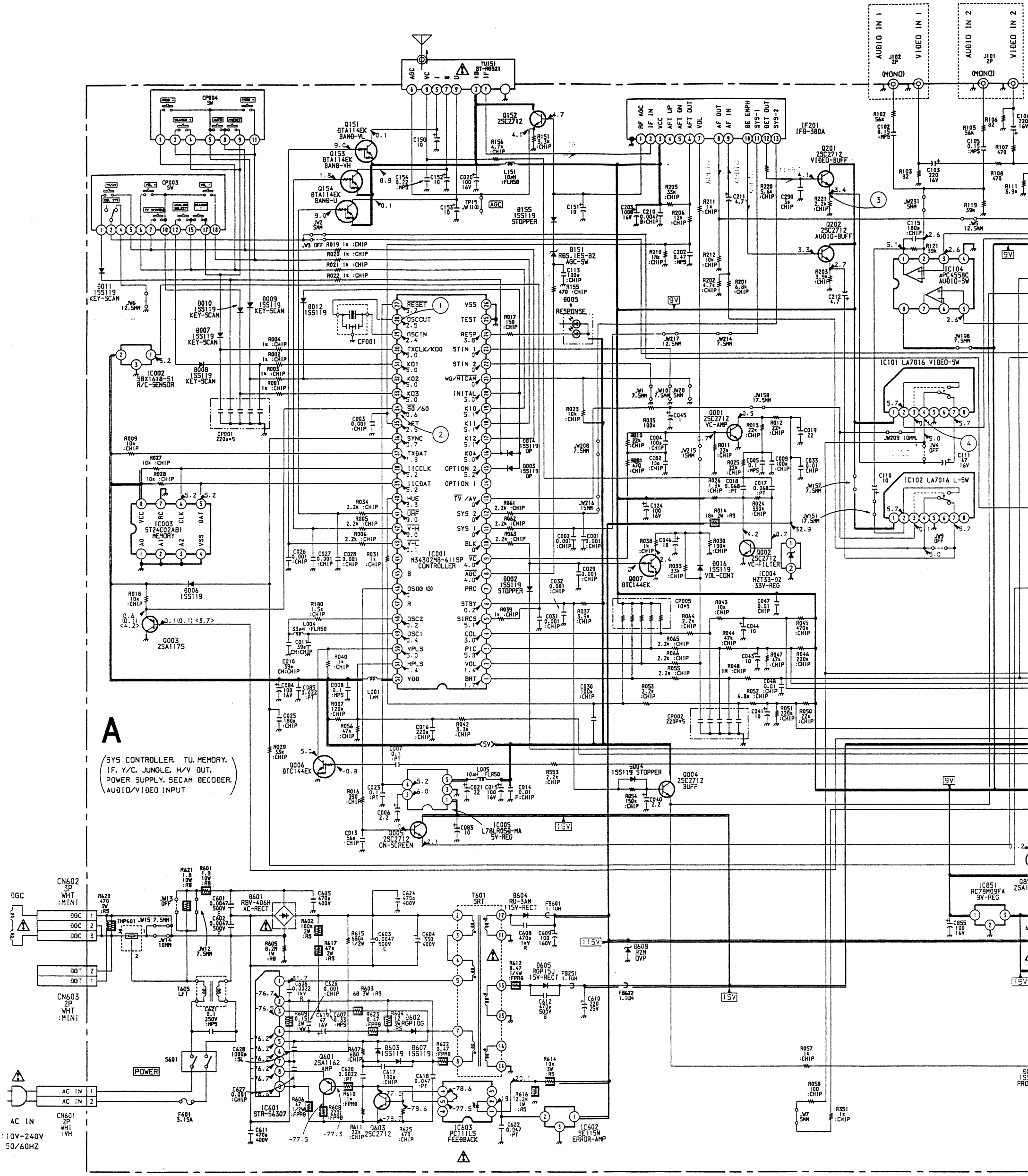
B-SS4187 < ME. > - A < WAVE LIST > - 1
-2

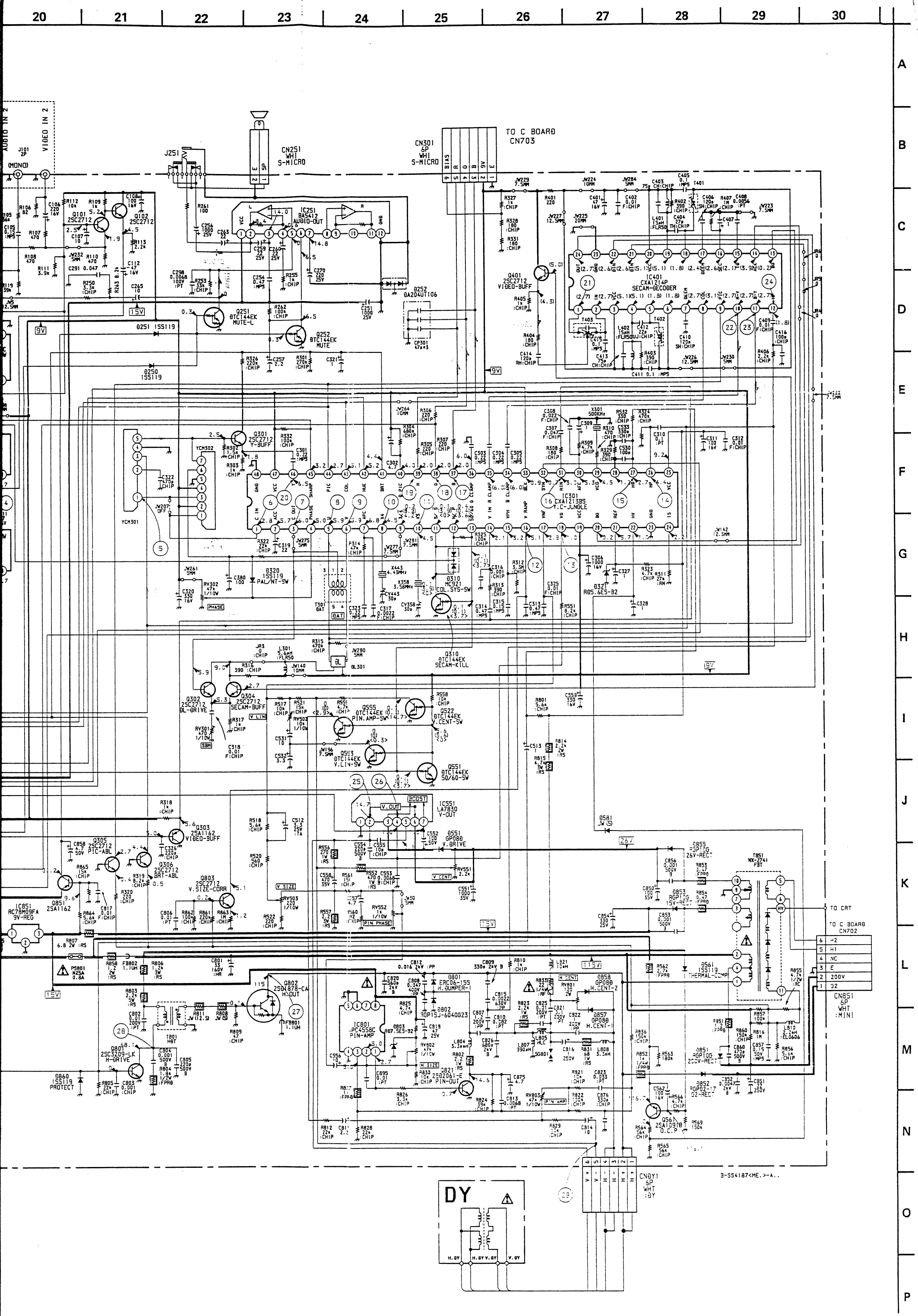
(1) Schematic Diagram of A Board




TU151 BT-A0321
IC001 M34302M8-611SP CONTROLLER
IF201 IF0-380A
IC101 LA7016 VIDEO-SW
IC102 LA7016 L-SW
IC104 μPC4558C AUDIO-SW
IC004 HZT33-02 33V-REG
IC005 L78LR05D-MA 5V-REG
IC851 RC78M09FA 9V-REG
IC601 STR-S6307
IC602 SE115N ERROR-AMP
IC603 PC111LS FEEDBACK
Q001 2SC2712 VC-AMP
Q002 2SC2712 VC-FILTER
Q201 2SC2712 VIDEO-BUFF
Q202 2SC2712 AUDIO-BUFF
Q301 2SC2712 Y-BUFF
Q302 2SC2712 DL-DRIVE
Q304 2SC2712 SECAM-BUFF
Q306 2SC2712 BRT-ABL
Q803 2SC2712 V.SIZE-CORR
Q303 2SA1162 VIDEO-BUFF
Q305 2SC2712 PIC-ABL
Q601 2SA1162 AMP
Q801 2SC3209-LK H-DRIVE
AUDIO IN 1
VIDEO IN 1
AUDIO IN 2
VIDEO IN 2
(MONO)
J102 2P
J101 2P
J251
YCM301
YCM302
115V
15V
5V
PHASE
RESPONSE
STOPPER
KEY-SCAN
AGC-SW
VOL-CONT
MUTE-L
PAL/NT-SW
PROTECT
H-DRIVE
V.SIZE-CORR
V-BUFF
SECAM-BUFF
BRT-ABL
PIC-ABL
ON-SCREEN
AC-RECT
STOPPER

Schematic Diagram of A Board

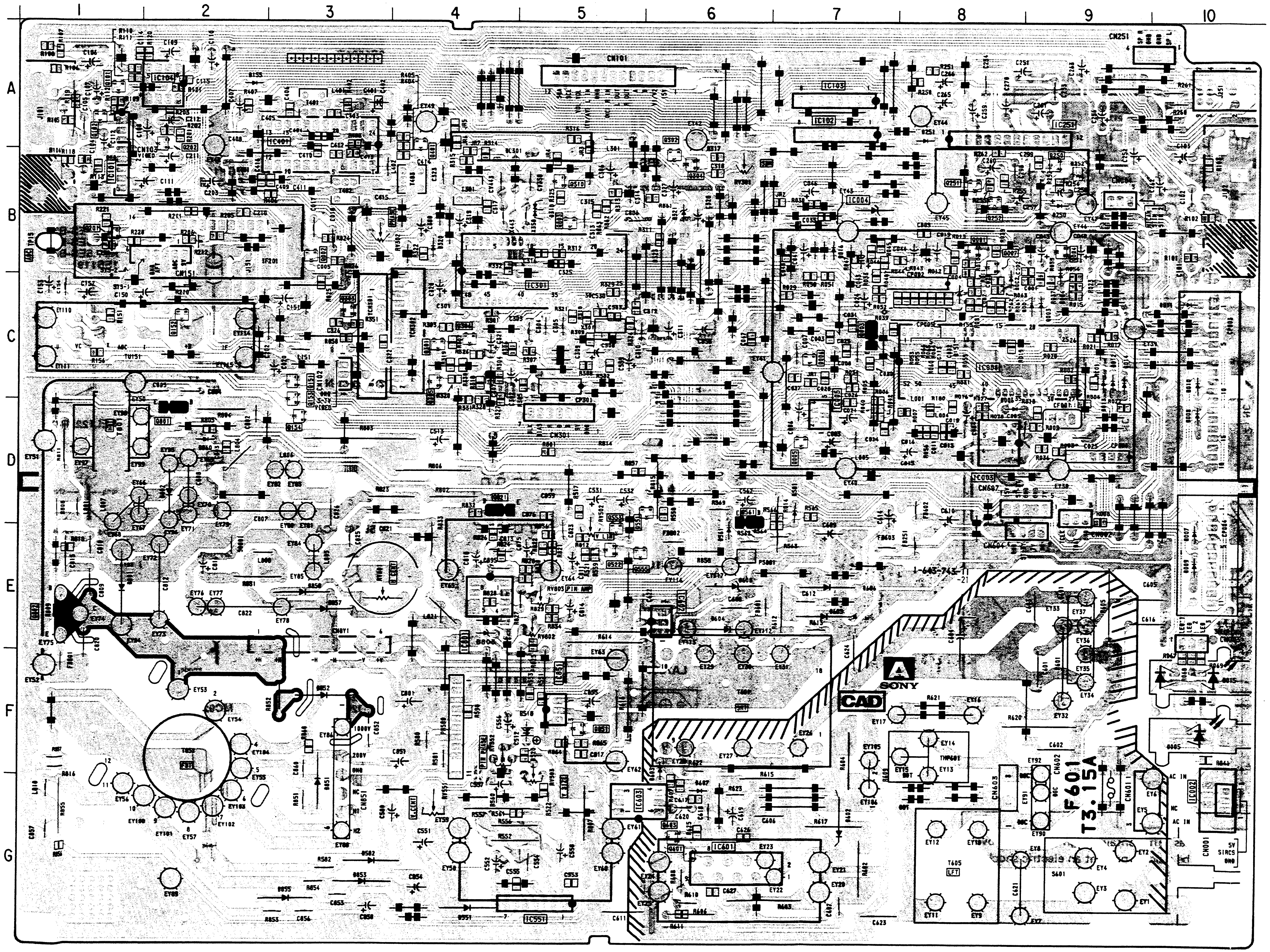



20
21
22
23
24
25
26
27
28
29
30
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
AUDIO IN 2
VIDEO IN 2
J101 2P
(MONO)
J251
CN251 WHI S-MICRO
CN301 6P WHI S-MICRO
TO C BOARD CN703
IC251 BA5412 AUDIO-OUT
Q101 2SC2712
Q102 2SC2712
Q251 DTC144EK MUTE-L
Q252 DTC144EK MUTE
D251 1SS119
D250 1SS119
D252 DA204UT106
CP301 47p*5
Q401 2SC2712 VIDEO-BUFF
IC401 CXA1214P SECAM-DECODER
Q301 2SC2712 Y-BUFF
YCM302
YCM301
IC301 CXA1213BS Y.C-JUNGLE
D320 1SS119 PAL/NT-SW
X443 4.43MHz
X358 3.58MHz
X301 500KHz
D310 MC921 COL.SYS-SW
D311 RD5.6ES-B2
Q310 DTC144EK SECAM-KILL
Q302 2SC2712 DL-DRIVE
Q304 2SC2712 SECAM-BUFF
Q555 DTC144EK PIN.AMP-SW
Q522 DTC144EK V.CENT-SW
Q553 DTC144EK V.LIN-SW
Q551 DTC144EK 50/60-SW
IC551 LA7830 V-OUT
Q551 GP080 V.DRIVE
Q303 2SA1162 VIDEO-BUFF
Q305 2SC2712 PIC-ABL
Q306 2SC2712 BRT-ABL
Q803 2SC2712 V.SIZE-CORR
Q851 2SA1162
IC851 RC78M09FA 9V-REG
PS801 N25A 0.8A
Q802 2SD1878-CA H.OUT
IC801 PC4558C PIN-AMP
Q801 2SC3209-LK H-DRIVE
D801 ERC06-15S H.BUMPER-1
D802 RGP15J-6040G23
D821 2SD2061-E PIN-OUT
D858 GP080 H.CENT-2
D857 GP080 H.CENT-1
D581 JW(S)
D855 RGP10G 25V-RECT
D853 RGP10G 15V-RECT
D851 RGP10G 200V-RECT
D852 RGP02-17 G2-RECT
D561 1SS119 THERMAL-COMP
Q56 2SA1091R O.C.P
T851 NX-2741 FBT
TO CRT
TO C BOARD CN702
CN702 6P WHT :MINI
6 H2
5 H1
4 NC
3 E
2 200V
1 G2
CN851 6P WHT :MINI
CN801 6P WHT :MINI
CN901 6P WHT :DY
DY
H.DY
H.DY V.DY
V.DY
B-SS4187<ME.>-A..

– A Board –

A SYS CONTROLLER, TU, MEMORY, IF, Y/C, JUNGLE, H/V OUT, POWER SUPPLY, SECAM DECODER, AUDIO/VIDEO INPUT

Board No
1-643-743-11 KV-2185MTJ only
1-643-743-21 KV-2185MT only



IC	
IC001	C – 8
IC002	G – 10
IC003	D – 8
IC004	B – 7
IC005	D – 7
IC101	B – 1
IC102	A – 7
IC104	A – 2
IC251	A – 9
IC301	C – 5
IC401	A – 3
IC551	G – 5
IC601	G – 6
IC602	E – 6
IC603	G – 5
IC801	E – 4
IC851	F – 5

TRANSISTOR	
Q001	B – 8
Q002	B – 3
Q003	C – 7
Q004	B – 9
Q005	D – 7
Q006	C – 7
Q007	B – 8
Q101	A – 1
Q102	A – 1
Q151	C – 3
Q152	C – 2
Q153	D – 3
Q154	D – 3
Q201	B – 1
Q202	A – 2
Q251	B – 8
Q252	B – 8
Q301	C – 4
Q302	B – 6
Q303	C – 3
Q304	B – 6
Q305	C – 4
Q306	C – 4
Q310	B – 5
Q401	A – 4
Q522	E – 5
Q551	D – 6
Q553	E – 5
Q555	E – 5
Q561	D – 6
Q601	G – 6
Q603	G – 6
Q801	D – 2
Q802	E – 1
Q803	B – 5
Q821	D – 4
Q851	F – 5

DIODE	
D002	C – 8
D003	C – 9
D004	C – 9
D005	F – 10
D006	D – 8
D007	E – 10
D008	D – 10
D009	E – 10
D010	C – 10
D011	C – 10
D012	C – 9
D014	C – 9
D016	C – 7
D151	C – 8
D155	A – 2
D250	B – 9
D251	A – 8
D252	B – 9
D310	B – 5
D320	B – 4
D321	B – 6
D551	G – 4
D561	E – 6
D601	C – 9
D602	G – 7
D603	F – 6
D604	E – 6
D605	E – 7
D607	G – 6
D608	E – 6
D801	E – 1
D802	D – 6
D803	E – 4
D851	G – 3
D852	F – 3
D853	G – 3
D855	G – 3
D857	E – 3
D858	E – 3
D860	D – 2

VARIABLE RESISTOR	
RV301	B – 6
RV302	B – 3
RV502	E – 5
RV503	G – 5
RV551	G – 4
RV552	F – 4
RV801	E – 3
RV802	E – 5
RV803	E – 5

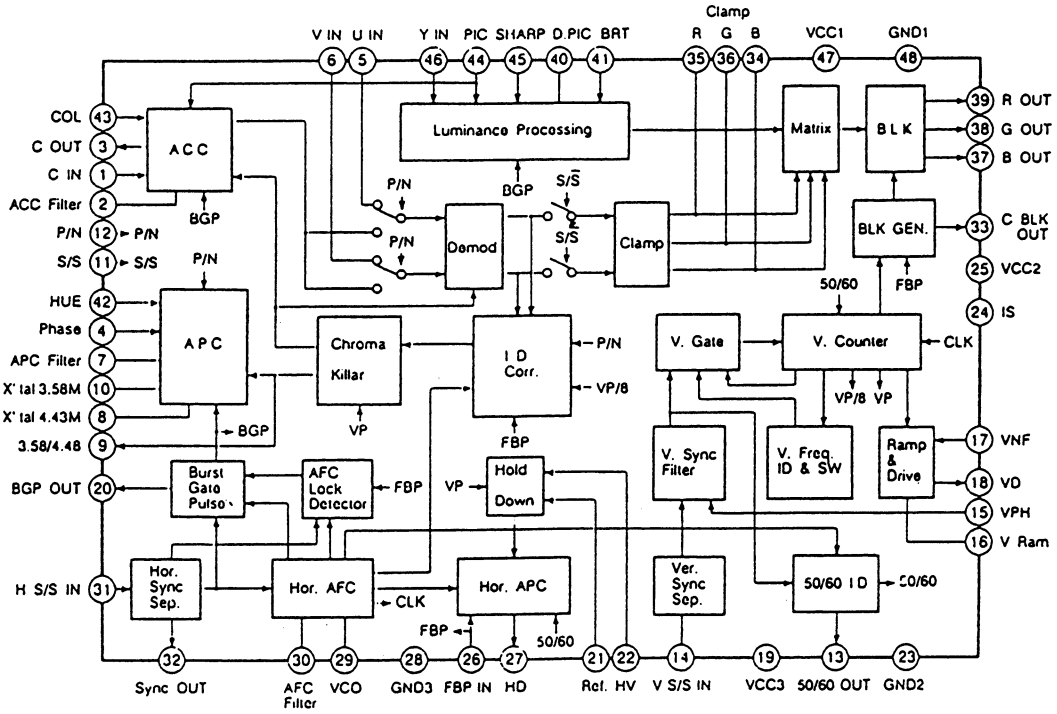
DELAY LINE	
DL301	B – 4

IF BLOCK	
IF201	B – 2

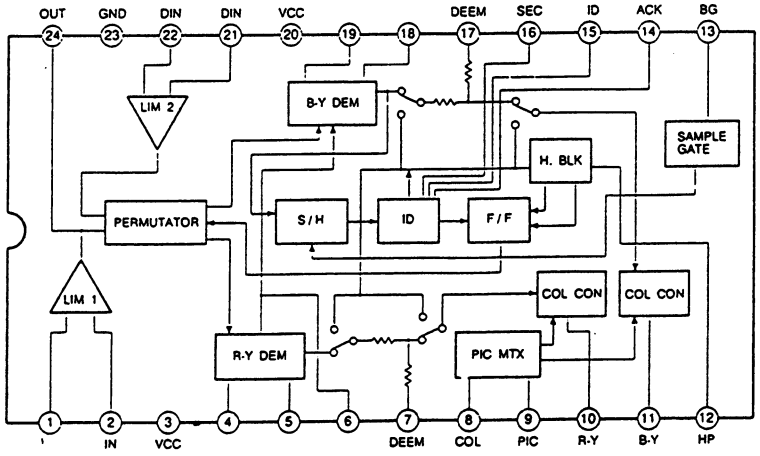
TUNER	
TU151	C – 1

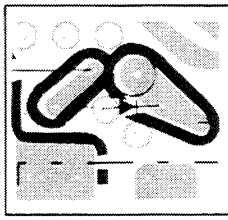
CRYSTAL	
X301	C – 5
X358	B – 5
X443	B – 4

A Board IC301 CXA1213S



A Board IC401 CXA1214P



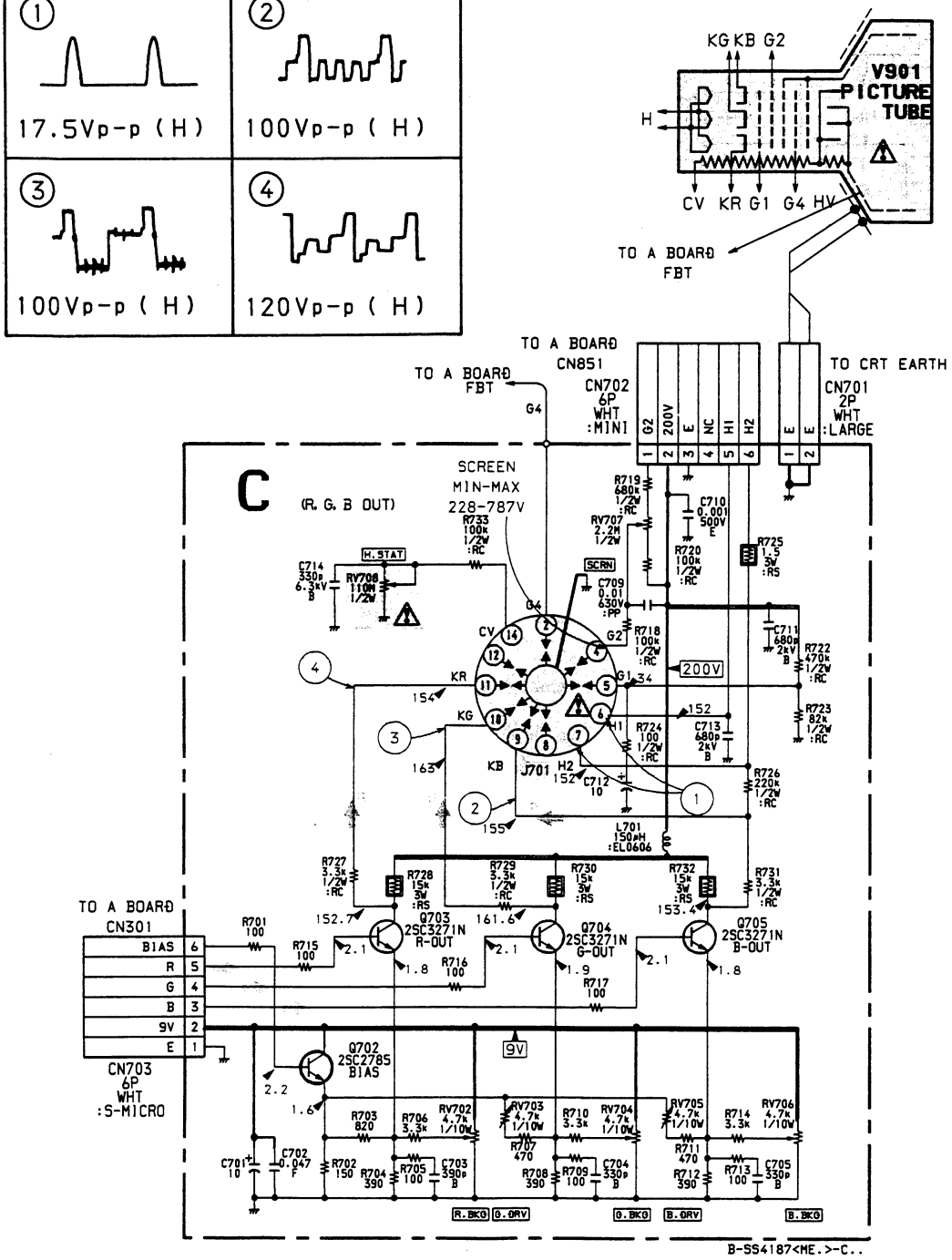


NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

(2) Schematic Diagram of C Board

• **C BOARD WAVEFORMS**

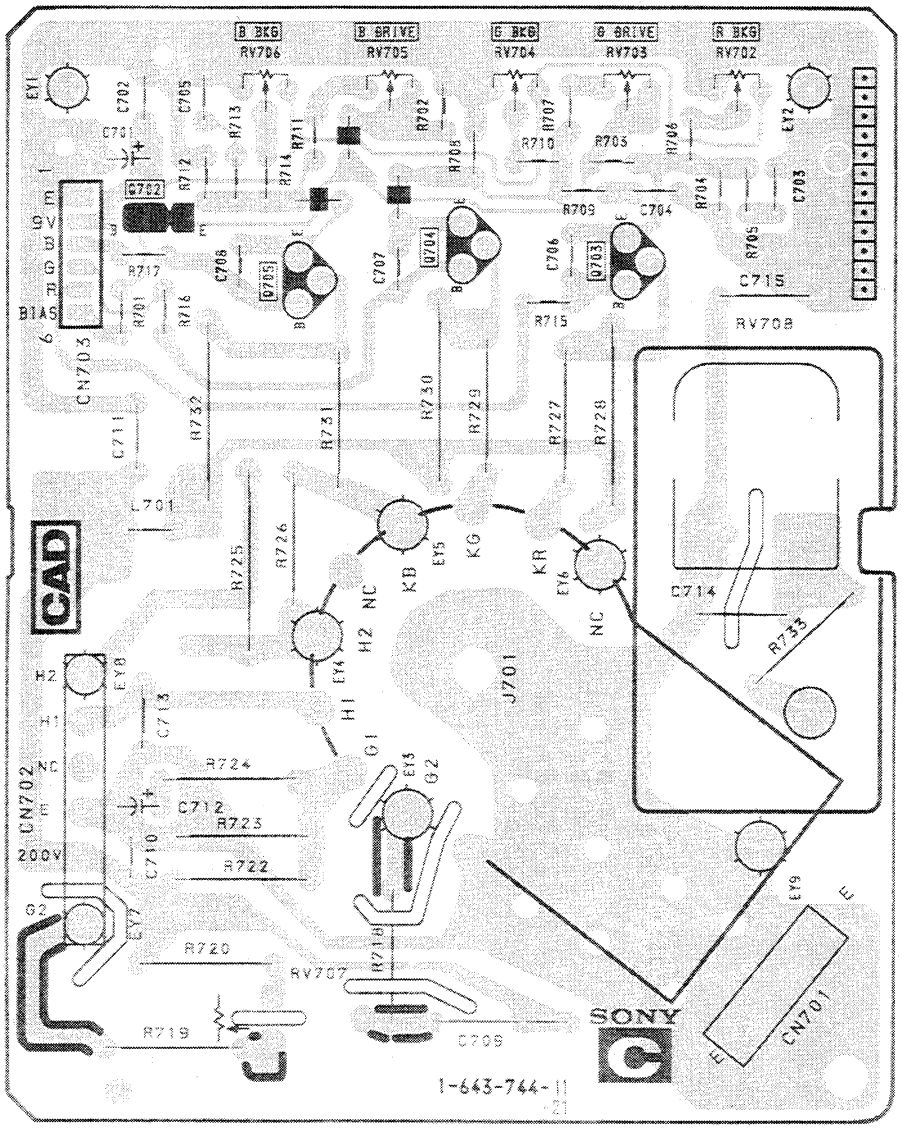
① 17.5Vp-p (H)	② 100Vp-p (H)
③ 100Vp-p (H)	④ 120Vp-p (H)



C (R.G.B OUT)

Board No
1-643-744-11 KV-2185MTJ only
1-643-744-21 KV-2185MT only

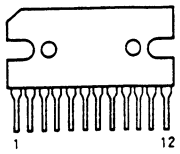
– C Board –



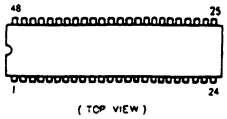
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

5-3. SEMICONDUCTORS

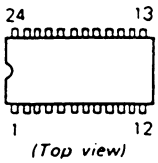
BA5412



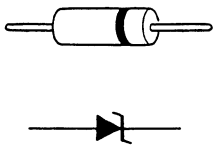
CXA1213BS



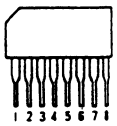
CXA1214P



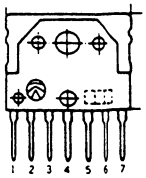
HZT33-02
μPC574J



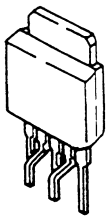
LA7016



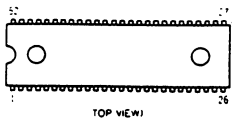
LA7830



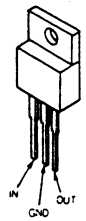
L78LR05D-MA



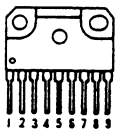
M34302M8-611SP



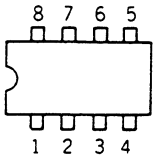
NJM78M09FA



STR-S6307

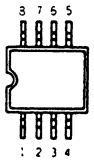


ST24C02AB1
μPC4558C



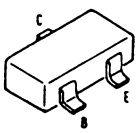
(Top view)

PC111LS

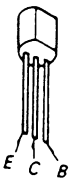


(TOP VIEW)

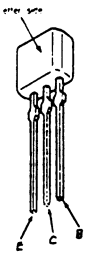
DTA114EK
DTC144EK
2SA1162-YG
2SC2712-YG



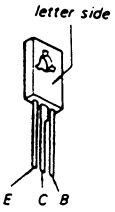
2SA1091-O
2S1091R



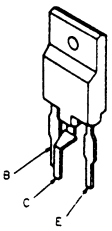
2SC2785-HFE



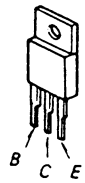
2SC3271-N



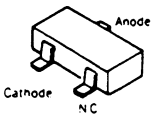
2SD1878-CA



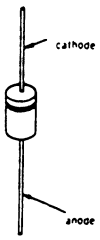
2SD2012
2SD2061-E



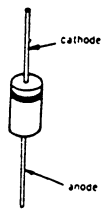
DA204U



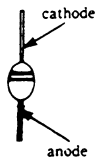
ERC06-15S
RGP10G
RU-3AM
R2M



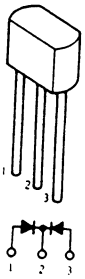
EGP20G
RGP02-17
RGP15J



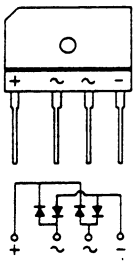
GP08D
U05G



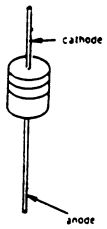
MC921



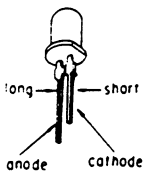
RBV-406H-01



RD5.1ES-B2
RD5.6ES-B2
RD7.5ES-B2
1SS119



SEL1222R-C

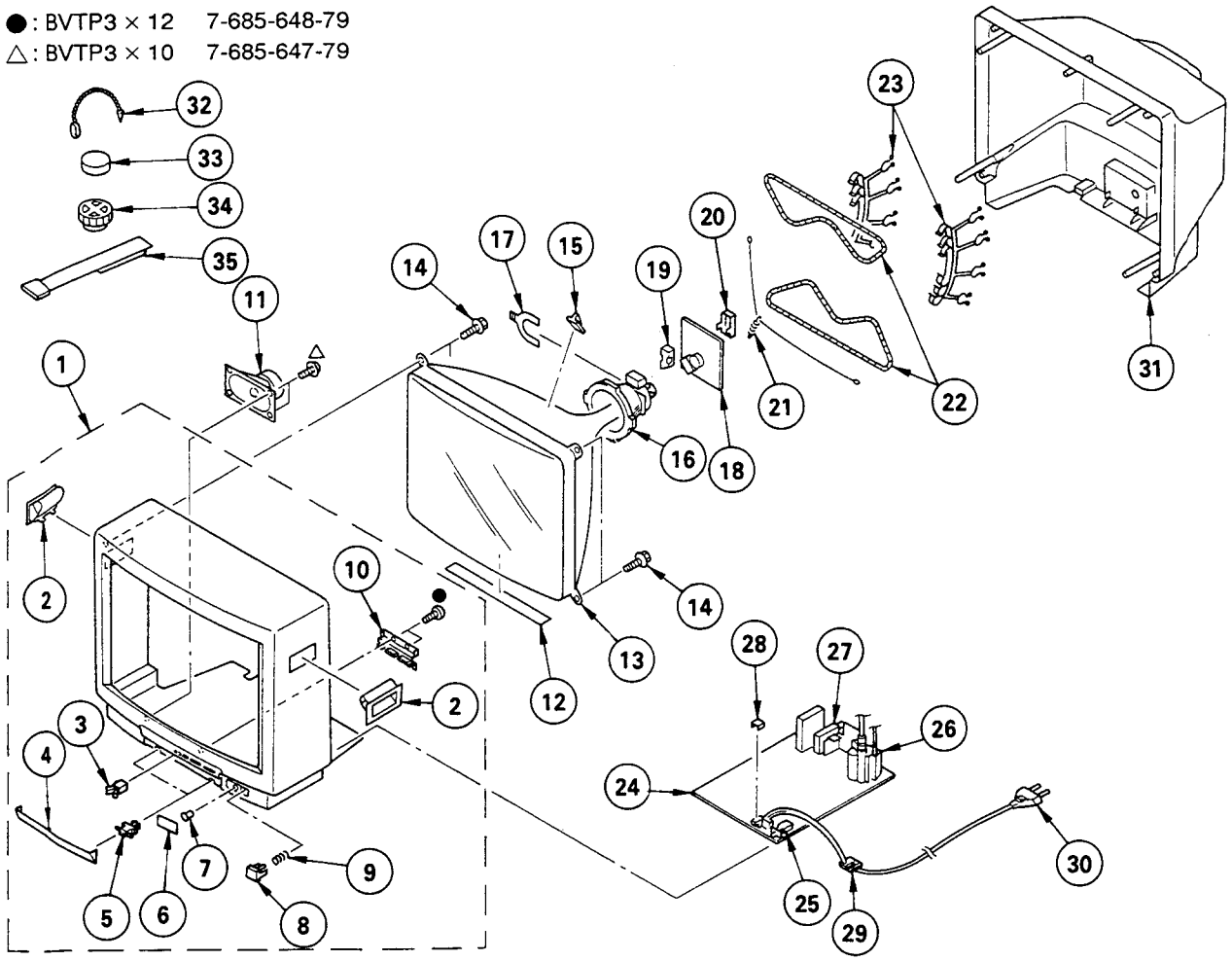


SECTION 6
EXPLODED VIEW

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

●: BVTP3 × 12 7-685-648-79
△: BVTP3 × 10 7-685-647-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	X-4030-389-1	CABINET ASSY (WITH BEZEL ASSY)	2~10 (KV-2185MTJ)
	X-4030-390-1	CABINET ASSY (WITH BEZEL ASSY)	2~10 (KV-2185MT)
2	4-313-702-91	HANDLE	
3	4-392-036-01	CATCHER, PUSH	
4	4-036-426-01	DOOR, CONTROL (KV-2185MTJ)	
	4-036-422-01	DOOR, CONTROL (KV-2185MT)	
5	3-662-365-00	SHAFT (S), DOOR (KV-2185MTJ)	
	4-032-761-01	SHAFT (S), DOOR (KV-2185MT)	
6	4-036-415-01	WINDOW, ORNAMENT (KV-2185MTJ)	
	4-036-413-01	WINDOW, ORNAMENTAL (KV-2185MT)	
7	*4-374-987-01	GUIDE, LIGHT (KV-2185MTJ)	
	*4-387-890-01	GUIDE, LIGHT (KV-2185MT)	
8	4-036-419-01	BUTTON, POWER (KV-2185MTJ)	
	4-036-411-01	BUTTON, POWER (KV-2185MT)	
9	4-036-405-01	SPRING, COMPRESSION (KV-2185MTJ)	
	4-036-405-11	SPRING, COMPRESSION (KV-2185MT)	
10	4-036-424-01	BUTTON, MULTI (KV-2185MTJ)	
	4-036-433-01	BUTTON, MULTI (KV-2185MT)	
11	1-544-763-11	SPEAKER (12X5CM)	
12	4-372-556-11	SHEET, BLOTTING	
13	⚠8-738-759-05	PICTURE TUBE (A51JUH11X)	
14	4-365-808-01	SCREW (5), TAPPING	
15	3-704-495-01	SPACER, DY	
16	⚠1-451-280-11	DEFLECTION YOKE (Y21PXA2)	
17	1-452-277-00	MAGNET, BMC	
18	*A-1331-211-A	C BOARD, COMPLETE	
19	*4-379-167-01	COVER (MAIN), CV	
20	*4-379-160-01	COVER (REAR LID), CV	
21	4-369-318-00	SPRING, TENSION	
22	⚠1-426-368-11	COIL, DEMAGNETIZATION	
23	*4-341-778-01	BAND, DEGAUSSING COIL	
24	*A-1296-953-A	A BOARD, COMPLETE	
25	⚠1-571-433-12	SWITCH, PUSH (AC POWER)	
26	⚠1-439-536-11	TRANSFORMER ASSY, FLYBACK (NX-2140A1)	
27	⚠1-693-120-11	TUNER, ET (BT-RG321)	
28	*4-387-054-01	COVER, LED HOLDER	
29	⚠4-022-115-01	HOLDER, AC CORD	
30	⚠1-574-062-12	CORD, POWER (WITH CONNECTOR)	(KV-2185MTJ)
	⚠1-574-062-22	CORD, POWER (WITH CONNECTOR)	(KV-2185MT)
31	4-036-435-01	COVER, REAR (KV-2185MTJ)	
	4-036-432-01	COVER, REAR (KV-2185MT)	
32	4-308-870-00	CLIP, LEAD WIRE	
33	1-452-032-00	MAGNET, DISK; 10MM ϕ	
34	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
35	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE	

A

SECTION 7
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

RESISTORS
- All resistors are in ohms
- F : nonflammable

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1296-953-A	A BOARD, COMPLETE			
		**********			
	*4-341-751-01	EYELET (EY7~EY17,EY22,EY23,EY26~EY37, EY66,EY68,EY69,EY71~EY76,EY78,EY79,EY81, EY84~EY86,EY88,EY90,EY92,EY95~EY99, EY105,EY106,EY112,EY113,EY116,EY117)			
	*4-341-752-01	EYELET (EY1~EY6,EY20,EY21,EY24,EY25, EY38~EY41,EY43,EY46,EY50~EY65,EY89,EY93, EY94,EY100~EY104,EY110,EY111,EY114, EY115)			
		HOLDER, FBT			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C001	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C002	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C003	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C004	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C005	1-136-165-00	FILM	0.1MF	5%	50V
C006	1-124-925-11	ELECT	2.2MF	20%	50V
C007	1-130-495-00	MYLAR	0.1MF	5%	50V
C008	1-136-165-00	FILM	0.1MF	5%	50V
C009	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C010	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C011	1-163-241-11	CERAMIC CHIP	39PF	5%	50V
C013	1-163-111-00	CERAMIC CHIP	56PF	5%	50V
C014	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C015	1-124-119-00	ELECT	330MF	20%	16V
C016	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C017	1-130-493-00	MYLAR	0.068MF	5%	50V
C018	1-130-493-00	MYLAR	0.068MF	5%	50V
C019	1-126-233-11	ELECT	22MF	20%	50V
C020	1-126-101-11	ELECT	100MF	20%	16V
C021	1-126-233-11	ELECT	22MF	20%	50V
C023	1-130-495-00	MYLAR	0.1MF	5%	50V
C024	1-126-101-11	ELECT	100MF	20%	16V
C025	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C026	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C027	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C028	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C029	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C030	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C031	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C032	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C033	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C040	1-124-925-11	ELECT	2.2MF	20%	50V
C041	1-124-907-11	ELECT	10MF	20%	50V
C043	1-124-907-11	ELECT	10MF	20%	50V
C044	1-124-907-11	ELECT	10MF	20%	50V
C045	1-124-903-11	ELECT	1MF	20%	50V
C046	1-124-907-11	ELECT	10MF	20%	50V
C047	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C048	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C082	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C083	1-124-907-11	ELECT	10MF	20%	50V
C084	1-126-233-11	ELECT	22MF	20%	50V
C085	1-130-487-00	MYLAR	0.022MF	5%	50V
C102	1-136-167-00	FILM	0.15MF	5%	50V
C103	1-124-120-11	ELECT	220MF	20%	16V
C105	1-136-167-00	FILM	0.15MF	5%	50V
C106	1-124-120-11	ELECT	220MF	20%	16V
C107	1-124-907-11	ELECT	10MF	20%	50V
C108	1-126-101-11	ELECT	100MF	20%	16V
C110	1-124-907-11	ELECT	10MF	20%	50V
C111	1-124-477-11	ELECT	47MF	20%	16V
C112	1-124-477-11	ELECT	47MF	20%	16V
C113	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C115	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C150	1-124-907-11	ELECT	10MF	20%	50V
C151	1-124-907-11	ELECT	10MF	20%	50V
C152	1-124-907-11	ELECT	10MF	20%	50V
C153	1-124-907-11	ELECT	10MF	20%	50V
C154	1-136-169-00	FILM	0.22MF	5%	50V
C202	1-136-173-00	FILM	0.47MF	5%	50V
C203	1-124-360-00	ELECT	1000MF	20%	16V
C210	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C211	1-124-927-11	ELECT	4.7MF	20%	50V
C212	1-124-927-11	ELECT	4.7MF	20%	50V
C251	1-124-557-11	ELECT	1000MF	20%	25V
C254	1-136-173-00	FILM	0.47MF	5%	50V
C256	1-124-557-11	ELECT	1000MF	20%	25V
C257	1-124-925-11	ELECT	2.2MF	20%	50V
C259	1-126-233-11	ELECT	22MF	20%	25V
C260	1-126-233-11	ELECT	22MF	20%	25V
C263	1-126-233-11	ELECT	22MF	20%	50V
C265	1-124-907-11	ELECT	10MF	20%	50V
C270	1-124-120-11	ELECT	220MF	20%	25V
C298	1-106-355-12	MYLAR	0.0027MF	10%	200V
C301	1-136-169-00	FILM	0.22MF	5%	50V
C302	1-124-927-11	ELECT	4.7MF	20%	50V
C303	1-136-169-00	FILM	0.22MF	5%	50V
C304	1-136-169-00	FILM	0.22MF	5%	50V
C305	1-136-169-00	FILM	0.22MF	5%	50V
C306	1-124-360-00	ELECT	1000MF	20%	16V
C307	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C308	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C309	1-124-903-11	ELECT	1MF	20%	50V
C310	1-130-495-00	MYLAR	0.1MF	5%	50V
C311	1-126-101-11	ELECT	100MF	20%	16V
C312	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C313	1-136-173-00	FILM	0.47MF	5%	50V

A

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C314	1-136-173-00	FILM	0.47MF	5%	50V
C315	1-136-167-00	FILM	0.15MF	5%	50V
C316	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C317	1-164-161-11	CERAMIC CHIP	0.0022MF		50V
C318	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C319	1-126-233-11	ELECT	22MF	20%	50V
C320	1-124-119-00	ELECT	330MF	20%	16V
C321	1-124-903-11	ELECT	1MF	20%	50V
C322	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C323	1-136-169-00	FILM	0.22MF	5%	50V
C325	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C326	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C327	1-124-903-11	ELECT	1MF	20%	50V
C328	1-124-903-11	ELECT	1MF	20%	50V
C380	1-124-122-11	ELECT	100MF	20%	50V
C401	1-124-477-11	ELECT	47MF	20%	16V
C402	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C403	1-163-114-00	CERAMIC CHIP	75PF	5%	50V
C404	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C405	1-136-165-00	FILM	0.1MF	5%	50V
C406	1-165-376-91	CERAMIC CHIP	120PF	5%	50V
C407	1-124-903-11	ELECT	1MF	20%	50V
C408	1-130-480-00	MYLAR	0.0056MF	5%	50V
C409	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C410	1-165-376-91	CERAMIC CHIP	120PF	5%	50V
C411	1-136-165-00	FILM	0.1MF	5%	50V
C412	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C413	1-163-114-00	CERAMIC CHIP	75PF	5%	50V
C414	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C415	1-136-165-00	FILM	0.1MF	5%	50V
C416	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C512	1-131-350-00	TANTALUM	3.3MF	10%	25V
C513	1-124-903-11	ELECT	1MF	20%	50V
C530	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C531	1-124-907-11	ELECT	10MF	20%	50V
C532	1-123-382-00	ELECT	3.3MF	20%	50V
C533	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C551	1-126-105-11	ELECT	1000MF	20%	35V
C552	1-124-514-11	ELECT	100MF	20%	50V
C553	1-163-019-00	CERAMIC CHIP	0.0068MF	10%	50V
C554	1-102-244-00	CERAMIC	220PF	10%	500V
C555	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C556	1-124-907-11	ELECT	10MF	20%	50V
C557	1-124-927-11	ELECT	4.7MF	20%	50V
C558	1-126-104-11	ELECT	470MF	20%	35V
C559	1-124-119-00	ELECT	330MF	20%	16V
C562	1-126-101-11	ELECT	100MF	20%	16V
C601 ⚠	1-161-830-91	CERAMIC	0.0047MF		500V
C602 ⚠	1-161-830-91	CERAMIC	0.0047MF		500V
C603	1-161-830-00	CERAMIC	0.0047MF		500V
C604	1-125-555-11	ELECT	330MF	20%	400V
C605 ⚠	1-164-497-51	CERAMIC	470PF	20%	400V
C606		CAP, CERAMIC			
C607	1-136-171-00	FILM	0.33MF	5%	50V
C608		CAP			
C609	1-126-600-11	ELECT	100MF	20%	160V
C610	1-124-120-11	ELECT	220MF	20%	25V
C611 ⚠	1-164-497-51	CERAMIC	470PF	20%	400V
C612	1-102-228-00	CERAMIC	470PF	10%	500V
C616 ⚠	1-164-246-51	CERAMIC	0.0022MF	20%	400V
C617	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C618	1-130-491-00	MYLAR	0.047MF	5%	50V
C619	1-126-803-11	ELECT	47MF	20%	16V
C620	1-130-475-00	MYLAR	0.0022MF	5%	50V
C621 ⚠	1-136-548-13	FILM	0.1MF	20%	250V
C622	1-130-491-00	MYLAR	0.047MF	5%	50V
C624	1-161-740-00	CERAMIC	470PF	20%	400V
C626	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C627	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C801	1-123-024-21	ELECT	33MF		160V
C802	1-106-367-00	MYLAR	0.01MF	10%	200V
C803	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C804	1-162-318-11	CERAMIC	0.001MF	10%	500V
C805	1-102-244-00	CERAMIC	220PF	10%	500V
C806	1-130-483-00	MYLAR	0.01MF	5%	50V
C807	1-136-569-11	FILM	1.2MF	5%	200V
C808 ⚠	1-129-747-51	FILM	0.047MF	10%	400V
C809 ⚠	1-162-115-91	CERAMIC	330PF	10%	2KV
C810	1-130-494-11	MYLAR	0.082MF	5%	50V
C811	1-124-925-11	ELECT	2.2MF	20%	50V
C812 ⚠	1-136-085-11	FILM	0.016MF	3%	2KV
C813	1-130-481-00	MYLAR	0.0068MF	5%	50V
C814	1-124-907-11	ELECT	10MF	20%	50V
C815	1-129-898-00	FILM	0.0022MF	5%	630V
C816	1-124-634-11	ELECT	1MF	20%	250V
C817	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C818	1-124-477-11	ELECT	47MF	20%	25V
C820 ⚠	1-162-115-91	CERAMIC	330PF	10%	2KV
C821	1-106-391-12	MYLAR	0.1MF	10%	200V
C822	1-136-111-00	FILM	1MF	5%	200V
C823	1-130-489-00	MYLAR	0.033MF	5%	50V
C825	1-106-367-00	MYLAR	0.01MF	10%	200V
C826	1-162-116-00	CERAMIC	680PF	10%	2KV
C850	1-124-122-11	ELECT	100MF	20%	35V
C851	1-123-948-00	ELECT	22MF	20%	250V
C852	1-162-114-00	CERAMIC	0.0047MF		2KV
C853	1-162-318-11	CERAMIC	0.001MF	10%	500V
C854	1-124-479-11	ELECT	330MF	20%	25V
C855	1-126-101-11	ELECT	100MF	20%	16V
C856	1-162-318-11	CERAMIC	0.001MF	10%	500V
C857	1-136-167-00	FILM	0.15MF	5%	50V
C858	1-124-927-11	ELECT	4.7MF	20%	50V
C860	1-102-228-00	CERAMIC	470PF	10%	500V
C875	1-126-163-11	ELECT	4.7MF	20%	50V
C876	1-163-129-00	CERAMIC CHIP	330PF	5%	50V
C895	1-130-483-00	MYLAR	0.01MF	5%	50V

<FILTER>

CF001	1-577-082-11	VIBRATOR, CERAMIC

<CONNECTOR>

CN251	*1-564-506-11	PLUG, CONNECTOR 3P
CN301	*1-564-509-11	PLUG, CONNECTOR 6P
CN601	*1-580-843-11	PIN, CONNECTOR (POWER)
CN602	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
CN603	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P
CN851	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P
CNDY1	*1-580-798-11	CONNECTOR PIN (DY) 6P

<NETWORK>

CP001	1-236-841-11	NETWORK, C
CP002	1-236-841-11	NETWORK, C
CP003	1-692-200-11	SWITCH BLOCK
CP004	1-692-201-11	SWITCH BLOCK

A

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
CP005	1-239-347-21	NETWORK, RES	
CP301	1-236-730-11	NETWORK, C	
		<TRIMMER>	
CV358	1-141-245-00	TRIMMER, CERAMIC	
CV443	1-141-245-00	TRIMMER, CERAMIC	
		<DIODE>	
D002	8-719-911-19	DIODE 1SS119	
D003	8-719-911-19	DIODE 1SS119	
D004	8-719-911-19	DIODE 1SS119	
D005	8-719-311-89	DIODE SEL1222R-C	
D006	8-719-911-19	DIODE 1SS119	
D007	8-719-911-19	DIODE 1SS119	
D008	8-719-911-19	DIODE 1SS119	
D009	8-719-911-19	DIODE 1SS119	
D010	8-719-911-19	DIODE 1SS119	
D011	8-719-911-19	DIODE 1SS119	
D012	8-719-911-19	DIODE 1SS119	
D014	8-719-911-19	DIODE 1SS119	
D016	8-719-911-19	DIODE 1SS119	
D151	8-719-109-85	DIODE RD5.1ES-B2	
D155	8-719-911-19	DIODE 1SS119	
D250	8-719-911-19	DIODE 1SS119	
D251	8-719-911-19	DIODE 1SS119	
D252	8-719-941-23	DIODE DA204U	
D310	8-719-000-06	DIODE MC921	
D320	8-719-911-19	DIODE 1SS119	
D321	8-719-109-89	DIODE RD5.6ES-B2	
D551	8-719-911-55	DIODE U05G	
D561	8-719-911-19	DIODE 1SS119	
D601	8-719-311-72	DIODE RBV-406H-01	
D602	8-719-300-33	DIODE RU-3AM	
D603	8-719-911-19	DIODE 1SS119	
D604	8-719-300-33	DIODE RU-3AM	
D605	8-719-979-85	DIODE EGP20G	
D607	8-719-911-19	DIODE 1SS119	
D608	8-719-303-49	DIODE R2M	
D801	8-719-945-80	DIODE ERC06-15S	
D802	8-719-979-85	DIODE EGP20G	
D803	8-719-110-03	DIODE RD7.5ES-B2	
D851	8-719-300-33	DIODE RU-3AM	
D852	8-719-028-71	DIODE ES1FLF-G	
D853	8-719-300-33	DIODE RU-3AM	
D855	8-719-300-33	DIODE RU-3AM	
D857	8-719-911-55	DIODE U05G	
D858	8-719-911-55	DIODE U05G	
D860	8-719-911-19	DIODE 1SS119	
		<DELAY LINE>	
DL301	1-415-122-31	DELAY LINE, 1H (PAL)	
		<FUSE>	
F601 ⚠	1-532-237-11	FUSE, TIME-LAG (BET) 3.15A/250V	
	1-533-223-11	CLIP, FUSE; F601	
		<FERRITE BEAD>	
FB251	1-410-397-21	FERRITE BEAD INDUCTOR	
FB601	1-410-397-21	FERRITE BEAD INDUCTOR	
FB602	1-410-397-21	FERRITE BEAD INDUCTOR	
FB801	1-410-397-21	FERRITE BEAD INDUCTOR	
FB802	1-410-397-21	FERRITE BEAD INDUCTOR	
		<IC>	
IC001	8-759-072-35	IC M34302M8-611SP	
IC002	8-741-100-62	IC SBX1618-51	
IC003	8-759-043-86	IC ST24C02AB1	
IC004	8-759-157-40	IC UPC574J	
IC005	8-759-805-37	IC L78LR05D-MA	
IC101	8-759-800-81	IC LA7016	
IC102	8-759-800-81	IC LA7016	
IC104	8-759-145-58	IC UPC4558C	
IC251	8-759-501-93	IC BA5412	
IC301	8-752-036-21	IC CXA1213S	
IC401	8-752-056-67	IC CXA1214P	
IC551	8-759-801-98	IC LA7830	
IC601 ⚠	8-749-920-67	IC STR-S6307	
IC602	8-749-921-89	IC SE115N	
IC603 ⚠	8-719-987-48	PHOTO COUPLER PC111LS	
IC801	8-759-145-58	IC UPC4558C	
IC851	8-759-982-34	IC RC78M09FA	
		<IF BLOCK>	
IF201	1-466-138-11	IF BLOCK (IFD-380A)	
		<JACK>	
J101	1-695-239-11	JACK BLOCK, PIN 2P	
J102	1-695-238-11	JACK BLOCK, PIN 2P	
J251	1-562-837-21	JACK	
		<COIL>	
L001	1-408-397-00	INDUCTOR 1UH	
L004	1-410-476-11	INDUCTOR 33UH	
L005	1-410-470-11	INDUCTOR 10UH	
L151	1-410-470-11	INDUCTOR 10UH	
L301	1-408-406-00	INDUCTOR 5.6UH	
L401	1-410-472-41	INDUCTOR 15UH	
L402	1-410-472-41	INDUCTOR 15UH	
L804	1-459-075-00	COIL,DYNAMIC CONVERSION CHOKE	
L805	1-459-769-13	COIL, HORIZONTAL LINEARITY	
L807	1-459-390-00	COIL (WITH CORE)	
L808	1-412-553-11	INDUCTOR 3.3MMH	
L810	1-408-947-00	INDUCTOR 2.2MMH	
L821	1-459-111-00	COIL, DRAM CORE (CDI)	
		<IC LINK>	
PS801 ⚠	1-532-685-91	LINK, IC 0.8A	
		<TRANSISTOR>	
Q001	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q002	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q003	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q004	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q005	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q006	8-729-901-01	TRANSISTOR DTC144EK	
Q007	8-729-901-01	TRANSISTOR DTC144EK	
Q101	8-729-230-49	TRANSISTOR 2SC2712-YG	

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q102	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q151	8-729-901-04	TRANSISTOR DTA114EK	
Q152	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q153	8-729-901-04	TRANSISTOR DTA114EK	
Q154	8-729-901-04	TRANSISTOR DTA114EK	
Q201	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q202	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q251	8-729-901-01	TRANSISTOR DTC144EK	
Q252	8-729-901-01	TRANSISTOR DTC144EK	
Q301	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q302	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q303	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q304	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q305	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q306	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q310	8-729-901-01	TRANSISTOR DTC144EK	
Q401	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q522	8-729-901-01	TRANSISTOR DTC144EK	
Q551	8-729-901-01	TRANSISTOR DTC144EK	
Q553	8-729-901-01	TRANSISTOR DTC144EK	
Q555	8-729-901-01	TRANSISTOR DTC144EK	
Q561	8-729-200-17	TRANSISTOR 2SA1091-O	
Q601	8-729-230-46	TRANSISTOR 2SA1162-YG	
Q603	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q801	8-729-140-50	TRANSISTOR 2SC3209LK	
Q802	8-729-821-87	TRANSISTOR 2SD1878-CA	
Q803	8-729-230-49	TRANSISTOR 2SC2712-YG	
Q821	8-729-209-15	TRANSISTOR 2SD2012	
Q851	8-729-230-46	TRANSISTOR 2SA1162-YG	

<RESISTOR>

JR1	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR2	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR3	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR4	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR5	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR6	1-216-295-00	METAL GLAZE	0	5%	1/10W	
JR7	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R001	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R002	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R003	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R004	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R005	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R006	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R007	1-216-099-00	METAL GLAZE	120K	5%	1/10W	
R009	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R010	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R011	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R012	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R013	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R014	1-216-464-11	METAL OXIDE	18K	5%	2W	F
R016	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R017	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R018	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R019	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R020	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R021	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R022	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R023	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R024	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R025	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R026	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R027	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R028	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R029	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R030	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R031	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R033	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R034	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R035	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R037	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R038	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R039	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R040	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R042	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R043	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R044	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R045	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R046	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R047	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R048	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R050	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R051	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R052	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R053	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R054	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R055	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R056	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R057	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R058	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R061	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R062	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R063	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R064	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R065	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R066	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R081	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R102	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R103	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R105	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R106	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R107	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R108	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R109	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R110	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R111	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R112	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R113	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R119	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R121	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R151	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R155	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R156	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R180	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R201	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R202	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R203	1-249-424-11	CARBON	3.9K	5%	1/4W	
R205	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R206	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R210	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R211	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R212	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R220	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R221	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R250	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R253	1-216-085-00	METAL GLAZE	33K	5%	1/10W	

A

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R255	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R261	1-249-411-11	CARBON	330	5%	1/4W	
R262	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R301	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R302	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R303	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R304	1-216-117-00	METAL GLAZE	680K	5%	1/10W	
R305	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R306	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R307	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R308	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R309	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R310	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R311	1-215-455-00	METAL	27K	1%	1/4W	
R312	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R313	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R314	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R315	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R316	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R317	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R318	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R319	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R320	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R322	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R323	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R324	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R325	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R326	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R327	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R328	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R329	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R331	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R332	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R351	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R401	1-249-409-11	CARBON	220	5%	1/4W	
R402	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R403	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R404	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R405	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R406	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R407	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R517	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R518	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R520	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R521	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R522	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R532	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R551	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R552	1-215-867-00	METAL OXIDE	470	5%	1W	F
R553	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R556	1-216-429-00	METAL OXIDE	270	5%	1W	F
R557	1-216-393-00	METAL OXIDE	2.2	5%	3W	F
R558	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R559	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R560	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R561	1-216-029-00	METAL GLAZE	150	5%	1/10W	
R562	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R563	1-247-885-00	CARBON	180K	5%	1/4W	
R564	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R565	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R566	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R569	1-247-883-00	CARBON	150K	5%	1/4W	
R601 ⚠	1-205-949-11	WIREWOUND	1.8	5%	10W	F
R602 ⚠	1-215-904-51	METAL OXIDE	100K	5%	2W	F
R603	1-215-910-00	METAL OXIDE	68	5%	3W	F
R604	1-216-469-11	METAL OXIDE	12	5%	3W	F
R605 ⚠	1-218-265-91	METAL GLAZE	8.2M	5%	1W	
R606	1-247-735-11	CARBON	47	5%	1/2W	F
R607	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R608	1-249-409-11	CARBON	220	5%	1/4W	F
R609	1-217-190-21	WIREWOUND	0.15	10%	2W	F
R610	1-249-417-11	CARBON	1K	5%	1/4W	F
R611	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R612	1-249-377-11	CARBON	0.47	5%	1/4W	F
R614	1-215-923-00	METAL OXIDE	10K	5%	3W	F
R615	1-244-941-00	CARBON	680K	5%	1/2W	
R616	1-215-871-11	METAL OXIDE	2.2K	5%	1W	F
R617 ⚠	1-215-902-51	METAL OXIDE	47K	5%	2W	F
R620 ⚠	1-215-915-51	METAL OXIDE	470	5%	3W	F
R621 ⚠	1-205-949-11	WIREWOUND	1.8	5%	10W	F
R622	1-249-377-11	CARBON	0.47	5%	1/4W	F
R623	1-249-377-11	CARBON	0.47	5%	1/4W	F
R625	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R801	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R802	1-216-353-00	METAL OXIDE	2.2	5%	1W	F
R803	1-215-944-11	METAL OXIDE	2.2K	5%	5W	F
R804	1-247-755-11	CARBON	1.8K	5%	1/2W	F
R805	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R806	1-216-481-11	METAL OXIDE	1.2K	5%	3W	F
R807	1-216-379-11	METAL OXIDE	6.8	5%	2W	F
R809	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R810	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R812	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R814	1-215-894-11	METAL OXIDE	2.2K	5%	2W	F
R815	1-215-921-11	METAL OXIDE	4.7K	5%	3W	F
R816	1-247-903-00	CARBON	1M	5%	1/4W	
R821	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R822	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R823	1-215-871-11	METAL OXIDE	2.2K	5%	1W	F
R824	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R825	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R826	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R827	1-249-417-11	CARBON	1K	5%	1/4W	F
R828	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R829	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R830	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R831	1-215-862-11	METAL OXIDE	68	5%	1W	F
R833 ⚠	1-212-865-61	FUSIBLE	22	5%	1/4W	F
R836	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R851	1-249-382-11	CARBON	1.2	5%	1/4W	F
R852	1-247-713-11	CARBON	1K	5%	1/4W	F
R853	1-249-377-11	CARBON	0.47	5%	1/4W	F
R854	1-249-377-11	CARBON	0.47	5%	1/4W	F
R856	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R857	1-249-441-11	CARBON	100K	5%	1/4W	
R858	1-216-370-11	METAL OXIDE	1.2	5%	2W	F
R860	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R861	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R862	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R863	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R864	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R865	1-216-077-00	METAL GLAZE	15K	5%	1/10W	

<VARIABLE RESISTOR>

RV301	1-238-011-11	RES, ADJ, CARBON 470
RV302	1-241-632-11	RES, ADJ, CARBON 47K

A C

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV502	1-241-630-11	RES, ADJ, CARBON 10K	
RV503	1-238-566-21	RES, ADJ, CARBON 220	
RV551	1-224-250-99	RES, ADJ, METAL GLAZE 2.2K	
RV552	1-241-627-11	RES, ADJ, CARBON 1K	
RV801	1-223-102-21	RES, ADJ, WIREWOUND 120	
RV802	1-241-632-11	RES, ADJ, CARBON 47K	
RV803	1-241-632-11	RES, ADJ, CARBON 47K	
		<SWITCH>	
S601⚠	1-571-433-12	SWITCH, PUSH (AC POWER)	
		<SPARK GAP>	
SG801	1-519-422-11	GAP, SPARK	
		<TRANSFORMER>	
T301	1-404-524-11	DAT	
T401	1-404-496-00	COIL	
T402	1-404-496-00	COIL	
T403	1-404-584-11	COIL	
T601⚠	1-450-988-11	TRANSFORMER, CONVERTER (SRT)	
T605⚠	1-424-682-11	TRANSFORMER, LINE FILTER	
T801	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE	
T851⚠	1-439-536-11	TRANSFORMER ASSY, FLYBACK (NX-2740A1)	
		<THERMISTOR>	
THP601⚠	1-808-059-32	THERMISTOR, POSITIVE	
		<TUNER>	
TU151⚠	1-693-120-11	TUNER, ET (BT-RG321)	
		<CRYSTAL>	
X301	1-577-611-11	OSCILALTOR, CERAMIC	
X358	1-567-505-11	OSCILLATOR, CRYSTAL	
X443	1-567-504-11	OSCILLATOR, CRYSTAL	
		<MODULE>	
YCM301	1-235-833-11	YC MODULE	
YCM302	1-236-228-11	FILTER MODULE	

****

*A	1-1331-211-A	C BOARD, COMPLETE	
		**********	
*4	1-341-751-01	EYELET (EY1,EY2,EY7,EY8)	
*4	1-341-752-01	EYELET (EY3~EY6)	
*4	1-379-160-01	COVER (REAR LID), CV	
*4	1-379-167-01	COVER (MAIN), CV	
		<CAPACITOR>	
C701	1-124-907-11	ELECT 10MF 20% 50V	
C702	1-101-006-00	CERAMIC 0.047MF 50V	
C703	1-102-113-00	CERAMIC 390PF 10% 50V	
C704	1-102-112-00	CERAMIC 330PF 10% 50V	
C705	1-102-112-00	CERAMIC 330PF 10% 50V	
C709	1-136-601-11	FILM 0.01MF 10% 630V	
C710	1-102-038-00	CERAMIC 0.001MF 500V	
C711	1-162-116-00	CERAMIC 680PF 10% 2KV	
C712	1-124-907-11	ELECT 10MF 20% 50V	
C713	1-162-116-00	CERAMIC 680PF 10% 2KV	
C714	1-162-622-11	CERAMIC 330PF 10% 6.3KV	
		<CONNECTOR>	
CN701	*1-506-371-00	PIN, CONNECTOR 2P	
CN702	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
CN703	*1-564-509-11	PLUG, CONNECTOR 6P	
		<JACK>	
J701⚠	1-526-990-13	SOCKET, PICTURE TUBE	
		<COIL>	
L701	1-408-423-00	INDUCTOR 150UH	
		<TRANSISTOR>	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-906-39	TRANSISTOR 2SC3271-P	
Q704	8-729-906-39	TRANSISTOR 2SC3271-P	
Q705	8-729-906-39	TRANSISTOR 2SC3271-P	
		<RESISTOR>	
R701	1-249-405-11	CARBON 100 5% 1/4W	
R702	1-249-407-11	CARBON 150 5% 1/4W	
R703	1-249-416-11	CARBON 820 5% 1/4W	
R704	1-249-412-11	CARBON 390 5% 1/4W	
R705	1-249-405-11	CARBON 100 5% 1/4W	
R706	1-249-423-11	CARBON 3.3K 5% 1/4W	
R707	1-249-413-11	CARBON 470 5% 1/4W	
R708	1-249-412-11	CARBON 390 5% 1/4W	
R709	1-249-405-11	CARBON 100 5% 1/4W	
R710	1-249-423-11	CARBON 3.3K 5% 1/4W	
R711	1-249-413-11	CARBON 470 5% 1/4W	
R712	1-249-412-11	CARBON 390 5% 1/4W	
R713	1-249-405-11	CARBON 100 5% 1/4W	
R714	1-249-423-11	CARBON 3.3K 5% 1/4W	
R715	1-249-405-11	CARBON 100 5% 1/4W	
R716	1-249-405-11	CARBON 100 5% 1/4W	
R717	1-249-405-11	CARBON 100 5% 1/4W	
R718	1-202-838-00	SOLID 100K 20% 1/2W	
R719	1-202-883-11	SOLID 680K 20% 1/2W	
R720	1-202-838-00	SOLID 100K 20% 1/2W	
R722	1-202-846-00	SOLID 470K 20% 1/2W	
R723	1-202-837-00	SOLID 82K 20% 1/2W	
R724	1-202-549-00	SOLID 100 20% 1/2W	
R725	1-216-391-11	METAL OXIDE 1.5 5% 3W	F
R726	1-202-842-11	SOLID 220K 20% 1/2W	
R727	1-202-824-00	SOLID 3.3K 20% 1/2W	
R728	1-215-924-00	METAL OXIDE 15K 5% 3W	F
R729	1-202-824-00	SOLID 3.3K 20% 1/2W	
R730	1-215-924-00	METAL OXIDE 15K 5% 3W	F
R731	1-202-824-00	SOLID 3.3K 20% 1/2W	
R732	1-215-924-00	METAL OXIDE 15K 5% 3W	F
R733	1-202-838-00	SOLID 100K 20% 1/2W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

C

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<VARIABLE RESISTOR>	
RV702	1-241-121-11	RES, ADJ, CARBON 4.7K	
RV703	1-241-121-11	RES, ADJ, CARBON 4.7K	
RV704	1-241-121-11	RES, ADJ, CARBON 4.7K	
RV705	1-241-121-11	RES, ADJ, CARBON 4.7K	
RV706	1-241-121-11	RES, ADJ, CARBON 4.7K	
RV707	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M	
RV708⚠	1-230-619-11	RES, ADJ, METAL GLAZE 110M	
**********			
		MISCELLANEOUS **********	
⚠	1-426-368-11	COIL, DEMAGNETIZATION	
⚠	1-451-280-11	DEFLECTION YOKE (Y21PXA2)	
	1-452-032-00	MAGNET, DISK; 10MM ϕ	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM ϕ	
	1-452-277-00	MAGNET, BMC	
	1-544-763-11	SPEAKER (12X5CM)	
⚠	1-574-062-12	CORD, POWER (WITH CONNECTOR)(KV-2185MTJ)	
⚠	1-574-062-22	CORD, POWER (WITH CONNECTOR)(KV-2185MT)	
V901 ⚠	8-738-759-05	PICTURE TUBE (A51JUH11X)	
**********			
		ACCESSORIES AND PACKING MATERIALS **********	
	1-417-151-21	MATCHING TRANSFORMER, ANTENNA	
	1-501-372-81	ANTENNA, TELESCOPIC (KV-2185MTJ)	
	1-569-008-11	ADAPTER, CONVERSION 2P	
	3-701-910-00	SCREW, SPECIAL (DIA. 3.8X20)	
	4-392-003-01	BAND, HOLD	
	4-392-004-01	CLIP	
	3-755-585-11	MANUAL, INSTRUCTION (ENGLISH/FRENCH/CHINESE/ARABIC/PERSIAN)	
*	4-035-560-01	CUSHION (UPPER) (ASSY) (KV-2185MTJ)	
*	4-035-561-01	CUSHION (LOWER) (ASSY) (KV-2185MTJ)	
*	4-036-040-01	INDIVIDUAL CARTON (KV-2185MTJ)	
*	4-384-027-01	BAG, PROTECTION (KV-2185MTJ)	
*	4-036-285-01	CUSHION (UPPER) (ASSY) (KV-2185MT)	
*	4-036-286-01	CUSHION (LOWER) (ASSY) (KV-2185MT)	
*	4-036-291-01	INDIVIDUAL CARTON (KV-2185MT)	
*	4-395-957-01	BAG, PROTECTION (KV-2185MT)	
		REMOTE COMMANDER	
	1-693-143-11	REMOTE COMMANDER (RM-827S)	
	9-902-546-01	COVER, BATTERY (FOR RM-827S)	